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ORIGINAL ARTICLES.

INFANTILE MORTALITY—A CAUSE AND PREVENTION.

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OF all the infants born into the world, according to official record, twenty-five per cent. die before attaining the age of five years, and, by the authority of Dr. West, of Dublin Infirmary, the cause thereof, in the largest number of cases, is found in children under two years of age, suffering from some one of the many forms of intestinal irritation. What startling figures! One-quarter of the human family doomed to perish a few months after birth! Deficient vitality is an acknowledged cause in many cases. Zymotic forms of disease largely contribute their quota, together with improper care and attention to the wants of the frail organism, but add, as you may, every cause and reason, and yet the appalling fact remains and stands unchallenged, that the largest number represented by the statistics upon the subject die before the termination of the teething period from diarrhœa, dysentery, and the imperfect assimilation of food, due to the combined ignorance and indifference of both the mother and physician in many cases. A child is brought into the world, and the nurse, without allowing the internal mechanism to adjust itself for future activity by the means that Nature, by her unerring plans, has provided, begins the reign of abuse by ignorantly mistaking the cries of the infant for hunger instead of comprehending that profound law, that the expressions of sound in the new-born babe is but simply an interchange of gases in the air-cells and the beginning of oxygenation of the blood, upon which the commencement and continuance of all other functions depend. By a proverbial law, she just mixes a "little sugar and water" to succor the apparently hungry child, the baby is quieted and the reign of abuse has begun. Instead of awaiting the natural lacteal flow, catnip tea, molasses and water, and the like are inflicted upon the unresisting infant *ad libitum*, according to the child's ability to retain, or the generous judgment of the nurse in attendance to supply. Censure not the nurse alone. I have known physicians to order such a regimen. Can any one point to Nature ever erring in the accuracy of her purposes or designs? And, to my mind, it may be taken emphatically for granted that, if it were essential to the child's welfare to be provided with nutriment from its first hour, the milk glands would open their ducts with the escape of the vertex. There is also, in this connection, a question of too vital importance for hasty thought and conclusion, namely, should the child, because the mother has a normal and sufficient supply of milk, depend upon it for sustenance simply because of that fact? I say—in many instances—No. A large number of women, vitiated by many inherent conditions productive of improper assimilation or enervation, dependent upon the exhaustion consequent upon previous months of gestation or of rapid pregnancies, are not physically capable of supplying as nutritious a fluid as the growing energies of the child demand; good bone and healthy tissue are only developed and produced upon a richly-formed supply of nutrition to the infant blood. Yet the rule applied universally is, that the appearance of milk in the mammary glands, after delivery, warrants the presumption that the child will be properly and sufficiently nourished without the consideration of other means. I fear a fatal presumption in many cases, and one of the contributory sources of infantile mortality from deficient vitality, the result of insufficient nutrition. In the animal the question of advisability never arises; there the milk, unaffected and unmodified by the influence of pernicious diet and habits, remains as pure and consistent to-day as it has flowed from all time. But, while the nursing of the infant at the breast may, perchance, in many cases, contribute its share toward the sum of early death insomuch as the child fails to receive a proper *quality* of milk, yet, after all, the more important duty of the writer lies, in his judgment, to the discussion of the artificial feeding of children, which, it is conceded, owing to the ignorance so universally displayed, is the prime and most influential factor in compiling the astounding figures that represent the early and appalling devastation of human life. Where the milk of the mother is deficient in quantity the growing energies of the child must be maintained, and in looking throughout the storehouse of Nature for a substitute, the milk of the cow has been universally selected. Unhappy delusion! The milk and nutritious supply for the calf has no place in the human kind; chemically unlike, yet made to fit, principally on account of its availability and cheapness. According to Konig, the milk of the cow and that of

the woman, in water, in fats, and in total solids, are nearly equivalent. But now the important discrepancy: cow's milk—caseine, 7.80; woman's milk—1.90, and in sugar, the mother's milk having nearly twice the supply found in the milk of the cow. With these facts well known by repeated experiment and investigation, the medical profession, in many cases, are not only content to recommend such a nutrition as a substitute for the natural supply, but by their advice and under their instruction, a food that by its chemical construction is not adapted fully to the wants and necessities of the child, is altered by the addition of substances in its preparation that not only make the cow's milk more incompatible but positively injurious to the unresisting and helpless infant. The milk of the mother is nearly twice as sweet as the milk of the cow, and to make up for this deficiency of construction, the daily practice, which has become almost universal, is to recommend the addition in indefinite quantities of *cane sugar*, a substance not only indigestible, as such, to the adult, but positively unlike, and without the slightest resemblance to, the *grape sugar*, the sweetening ingredient of the mother's milk.

What is the result? It is answered in a moment: The formation in excess of hydrochloric acid, and an immediate coagulation of the caseine; or, in other words, the child's stomach is converted into a receptacle for the making of cheese. The caseine, as it appears after coagulation, upon close examination, is a substance tough and stringy, positively indigestible, which passes out of the stomach, producing irritation along the entire course of the alimentary canal, until finally expelled from the rectum in stools inclined to be green and which are excoriating, owing to the acidity of the stomach and its dependent structures. Is it surprising, let me candidly ask, in view of this fact alone, that we find children within the first few weeks of their existence suffering with stomatitis and other evidences of inflammatory action along the whole course of the digestive tract? Show me a child brought up to the age of two months upon such a diet without some digestive resentment, and I will show you a physical marvel. I will confess that I have seen children pointed out to me who have been reared successfully upon *condensed milk* and *cane sugar*, but in no such example has not the mother confessed to me the recollection of continuous difficulties of digestion, and the many physical contests the child had maintained against the prostrating influence of diarrhœa and kindred complaints. Some children are born into the world with an almost inextinguishable spark of vitality and tenacity of life, who weather the seas of serious ailment and disease, and survive the most dire maladies, and die of old age and physical decay eventually. Such a statement, as we know by our common observation, is the acknowledged exception, and hence how serious to establish, as a rule, the feeding of infants upon a diet known and proven to be injurious, simply because of convenience of preparation and moderateness in expense!

I shall enumerate, as a second source of infantile mortality, lack of care and cleanliness in preparation of food for the child's stomach, and under this head I shall speak of a factor as contributory as the combined influence of *cane sugar* and *condensed milk*, namely, the new-fashioned nursing bottle. Many children begin with a bottle and tube fresh and pure, which would not be recognized by any such name a week afterwards. Sometimes, after use, the bottle may be rinsed or dipped, and allowed to drain, but I care not if the most exacting care be displayed, I will give the rubber tube but four weeks to be constantly employed, before it will, by its odor, uncompromisingly remind one of a blast of wind from Barren Island, where putrid flesh and reeking bones are doing penance in flames and cinders, and are sending forth their horrid fumes to the nostrils of the living, to remind them, without a preference or selection, of the experience and doom that may be their own in the "Sweet By and By."

I recommend and always have used, for the new born infant, an old-fashioned green glass bottle (or a half dozen consecutively) and with it a good supply of rubber nipples that may be, as they are employed, drawn over the neck of the bottle. Such a course will do very well for a child up to the second or possibly third month. When it begins to notice surrounding objects, then the head becomes restless and other means must be devised, otherwise the nipple would constantly need to be replaced within the child's mouth. My plan is to have the parents continue with the same pattern of bottle, and through a cork which fills the mouth, a piece of tubing is drawn (say six to ten inches in length) *which is replaced by a fresh piece twice a week*. It can be purchased at a trivial cost by the yard in any store where rubber goods may be procured. By such a plan the milk is not allowed to remain a sufficient length of time to sour the tube and thereby wash into the child's stomach particles of soured milk that are certain to be retained by long use, and which cannot be removed unless by the most diligent application, which, alas! is but too seldom employed. In fact, I recall the case of a mother who solicited my services, who was feeding her child from a rubber tube, which was nauseating to the nostrils, and from a bottle that had been previously consigned to the conveyance of lager beer. The example is not overdrawn, except possibly in the application of the bottle that was being employed. Regarding the rubber tube, it probably

had as much care and was in as healthy condition as thousands being used in many a devised nursing bottle. In other words, the tube is generally in constant service until it is worn through from constant handling, or until the child dies or is weaned from the bottle. It is seldom renewed. Now, let me ask, in candor, are not these two factors sufficient in themselves to account for most of the cases of intestinal irritation as found in our daily practice among infants? But I will go on to another prevalent cause of infantile mortality, namely, the custom of feeding infants under ten months of age with articles of diet which they are unable to digest, and which are not demanded by the system at so early an age, and therefore, find no assimilation; such articles as meat, potato, tea, coffee, *brandy and water*, etc. Until the child possesses teeth, and mastication has become a process of digestion, the gastric juices are not in readiness to dissolve these substances, hence they lie in the stomach, and by the action of the high temperature of that organ during the digestive process, decompose, and by emitting carbonic gas, are productive of hiccough and colic, and by the irritation produced are the frequent cause of diarrhœa and vomiting.

I find another source of the early development of disease in infants, in the fact that mothers nurse their children at the breast after they have attained the age of twelve months—in fact, after the eruption of the teeth. Now, Nature speaks in a silent but intelligible language and gives us plain warning of when other foods are required for digestion, and for our instruction and guidance the teeth are brought into view. Yet with this lesson, so plain and convincing, before us, many a mother, with the concurrence of her physician, nurses her children until they verge upon their second year. I offer no further argument under this head than is written upon the pale, anæmic face of every child so improperly fed and impoverished. If I were writing upon the effects of such drain upon the mother, for many months by day and night, I might here point to one of the indisputable causes (in my judgment) where the predisposition happens to exist, of the beginning of constitutional decay, as exhibited in phthisis pulmonalis, and malignant degeneration of the uterus and mammary gland. If space permitted, I might recite many other reasons as a cause of infantile mortality, but for one article I have enumerated, I believe, enough, and shall, before passing to the consideration of the means of prevention, simply reiterate the heads of criticism just discussed: *First*, the feeding of infants; *cow's milk* and *cane sugar* combined. *Second*, the use of new-fashioned and "labor-saving" nursing bottles. *Third*, the feeding of infants with indigestible substances. *Fourth*, the nursing of the child at the breast after the twelfth month.

The prevention of the great mortality, which is so extensively the sad record of our vital statistics, might be largely reduced, in my judgment, would the practitioners of medicine take it upon themselves to become more intelligent upon the subject of infantile feeding, and employ more pains to instruct parents in the manner that true experience and the science of physiology has taught regarding such an important and vital matter. In the first place, let it be put down as a fundamental law in the nutrition of children under the period when the teeth have begun to show themselves, that it is as physically impossible for the child to digest starch or saccharine-making substances as to digest potato or other vegetables composed largely of starch. Now, let me ask in sincerity, how would it look to feed an infant one month old with potato? A physician who would order such a diet would be held in ridicule and contempt, yet many a practitioner of medicine of reputable standing orders a diet of *condensed milk* and *cane sugar*. He says: "Madam, put one teaspoonful of condensed milk to a cup of warm water, and add enough sugar to sweeten it." Now, if any one will show me the difference between the state of the stomach, during digestion, in which cane sugar or starchy food has been introduced, I should be obliged to the donor of the information, and I ask for enlightenment. Yet, if many a conscientious physician will confess the truth, he will acknowledge such a course to be his daily plan, and what I have just penned substantially the advice he imparts. It will be recalled that the milk of the cow and that of the woman are nearly identical in chemical structure except that the former has an excess of caseine and a deficiency of grape sugar; while the latter possesses a deficiency of caseine and an excess of grape sugar; in other words, the woman's milk is nearly twice as sweet as the cow's. The caseine, it will be seen, is a foreign ingredient in the mother's milk (in fact, but a trace is found), difficult to accommodate during the digestive process, but more especially when curdled by the addition of cane sugar, which immediately produces by its presence an excess of hydrochloric acid, and a veritable cheese is formed, which the child cannot dissolve or digest. Nature must in all cases be subserved, and we all know, by our experience, that we must prescribe our medicines, feed our sick, watch with care our own diet; if not, how soon a revolt! Yet that frail and tender organism, the infant, unable to give expression to its ills and discomforts, except in unintelligible language, must struggle against the abuse of diet until the stomach, tired of the contest, resigns the child to disease, which lingeringly terminates the life that otherwise might have thriven, unless perchance, the causes irritating to the stomach are removed by the hand of intelligence, or the child, possessed of an

inherent tenacity of life, withstands the contest, and passes into the second period of childhood, though not without the plain evidence of impaired digestion and imperfect nutrition, as the reward of victory.

Always endeavor to have the new-born infant nurse at the breast if possible; if the supply is insufficient, possibly the fluid extract of jaborandi in doses of ten drops, thrice daily, may be effective. With some the drinking of milk, and among the Germans and sometimes others, the use of lager beer, assists largely in attaining the desired result. On the other hand, after a faithful effort has been made by some of the means suggested, and the quantity is not sufficient to supply the requirements of the child, I should advise the mother to wean the infant at once, as the fact of there being a deficiency of milk explains in unmistakable language a deficiency of tone, which condition will not only affect the infant unfavorably, but further enervate the mother.

Recalling my experience in the treatment of the diseases of children suffering with difficulties of the digestive system, as expressed in diarrhœa and intestinal irritation in some of its many forms, during the past few summers, including the present, I believe that my statement that the number so affected is made up almost exclusively of children artificially nourished, will be borne out by many professional colleagues in the cities of New York and Brooklyn, and also that the most of the large number so suffering are children fed by *condensed milk* and *cane sugar*, which means that their digestive powers are struggling with futile efforts to digest large quantities of coagulated caseine. I find also, in most cases, and believe that it is the experience of others in the profession, that mothers use almost exclusively *canned condensed milk*, because of its cheapness and from the fact that it is already sweetened. Lamentable ignorance! and yet how many of our so-called reputable practitioners are silent and indifferent witnesses of this abuse! In view of the emphatic criticism that has been made by me regarding the custom now prevalent of supplying the infant stomach with nutriment, the question might by this time, with absolute reason be asked, so long as condensed milk and cane sugar are so positively condemned, where shall we look for, or how shall we prepare, a food that will take the place as nearly as possible of a healthy supply of woman's milk? This question I will endeavor to answer. In the summer of 1880, I had the happy announcement to make to my many friends that I was possessed of an heir and a son; a weakly little fellow, to say the most, and both mother and father despaired of raising him to an age of future usefulness and honor. To make what appeared a bad matter worse, the mother, for various reasons, was unable to supply the tender little frame with that sustenance which nature had abundantly provided, and from, I believe, healthy springs. It is a true saying, I believe, that physicians know but little about the proper treatment of children until they have had children of their own. I was, I confess, fully covered by the rule, and willingly seconded the nurse when she heartily recommended *condensed milk* dissolved in warmed water and avalanched with the contents of the sugar bowl, which diet was abundantly supplied and as vigorously applied.

When the little fellow was about one month old, he gave unmistakable evidence of intestinal irritation, which terminated in a confirmed dysentery, his stools numbering more than a dozen a day, and he was fast failing under the exhausting effects of the frequent discharges. I was naturally much concerned and I felt that the course of feeding that we were employing was not agreeing with him as we desired. Where should I turn for relief? I remember distinctly one morning while investigating a formula in a work on physiology upon the means of conversion of cow's milk into a milk similar to that of woman's, when my servant delivered to me my morning mail, among the other packages and letters was, together with a pamphlet, describing its composition, a sample of Mellin's food for infants. After an investigation of the formula, I found that I might, by its union with unmodified cow's milk, obtain nutrition for the child similar to what would have been received at the breast. I concluded at once to give it a trial. I prepared a part of the sample sent me, and before I had used it all, I began to see a halt in the frequency and character of the stools that were enervating more and more every hour the sinking child; its effects were marvelous, and he began rapidly to improve in his general health and appearance, until, to-day, he is a ruddy and robust child; his digestive powers are strong, and I do not believe that since the period of his first sickness I have prescribed for him six times.

Now, I have not made this statement, or have I written one word of this essay, for the benefit of Mr. Mellin or anybody else, but I will say, emphatically, that I believe that I have saved many hundred lives besides my own boy's by the use of the food prepared by him. All I know of the food is this, that it does away entirely with the use of *cane sugar* and supplies according to its formula, grape sugar (which infants can digest and which does not coagulate the caseine as the cane sugar will do) sufficient to sweeten the cow's milk, fully equal to the mother's milk, besides other substance that are contained largely in woman's milk. This fact is, I consider, of untold benefit to thousands upon thousands of children in our cities, and I feel it my conscientious duty wherever I am able to use my influence against this continued abuse of the infant stomach, and I preach one or two sermons

upon the subject every day. Use any one of the prepared foods you may choose, anything so long as *condensed milk* and *cane sugar* are abolished. Any one will do far better. Naturally I prefer Mellin's food, and from my investigation of other foods, I conclude that it is better adapted, as a food easy of digestion, simply because it contains in a hundred parts much more of grape sugar than Hawley's, Horlick's or any other that I have inspected. In fact Horlick's food contains considerable *cane sugar*, as proved by chemical analysis, which certainly must modify its efficacy, in maintaining a healthy process of digestion.

In conclusion, let me simply trust that by the combined efforts and investigation of both physician and physiologist, this subject of easy and non-irritating assimilation of artificial food by the infant may attain such excellence and perfection that the mortality of children may be reduced far below the appalling figures that are now the index of the records of our vital statistics.

ON THE COMBINATION OF DRUGS.

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Part II.

Now, turning to the symptoms of causticum, as given by Cowperthwaite, and comparing them with tartar emetic, we have the following result:

Mind—Weakness of memory. Caust. Not found elsewhere. Melancholy mood, apprehensive, despondent, with exhaustion. Caust. Despondent and apprehensive about his recovery. Also: Hopeless, despondent mood toward evening, with chilliness, pain in the chest and great sleepiness. Also: Weakness and exhaustion. Tart.

Anxious, uneasy, unfitted for anything. Caust. The anxiety increases with the nausea. Also: She is frightened at every trifle. Also: Apprehensive and restless. Tart.

Peevish and fretful. Caust. Bad humor, everything goes wrong; peevish and quarrelsome. Tart.

Inattentive and distracted. Also: Disinclined to work. Caust. Not found, although stupor, prostration, fatigue, etc., are under tart.

Head—Vertigo, forwards and sideways; at night in bed, on rising and lying down again; on looking fixedly at an object. Caust. Vertigo. Also: Head confused with heaviness and pressure in the forehead. Also: Violent pain in forehead and vertigo. Also: Confusion of the head, like a pressure in the temples. Also: On trying to lift his head he felt a dizziness which obliged him to replace it again on the pillow. Also: Vertigo with flickering before the eyes. Tart.

Painless digging in the whole head. Caust. Headache like a tension, with drawings and burrowings. Also: Dull borings as from a blunt instrument, below the right frontal eminence. Tart.

Throbbings and stitches in vertex. Caust. Not found exactly, but throbbings are frequently reported in various regions and several kinds of pain in the vertex are mentioned under tart.

Pressive pain in the right frontal eminence. Caust. Pressive headache all day, especially in the forehead. Also: Dull boring, as from a blunt instrument, below the right frontal eminence. Also: Pressive headache in the centre of the forehead. Tart.

Pain at a small spot in the vertex, as if bruised, only on touch. Caust. Burning and itching in a place as large as a half-dollar in the anterior part of the right parietal bone on stooping. Tart.

Stitching in the temple. Caust. Sticking in the temple. Tart.

Itching of scalp. Caust. Itching in the skin. Also: Itching, now here, now there. Also: Itching over the whole body. Tart.

In the scalp a tension. Caust. In the temple a tension, as if squeezed. Also: Tension on the vertex. Tart.

Eyes—Inflammation, with burning, stinging dryness, and photophobia. Caust. Blood-shot eyes. Also: Acute conjunctivitis. Also: Burning in the eyes, evenings. Also: Burning and biting in right internal canthus and redness of the conjunctiva. Tart.

Pressure in eyes, as if sand were in them. Caust. Pressure on both eyes. Also: Sense of weight on eyes. Tart.

Itching of the eyes, especially of the lids Caust. Not found.

Inclination to close the eyes, lids seem heavy, even paralysis of the upper lids. Caust. Eyes feel so tired that they would close. Also: Difficulty of moving the lids. Tart.

Burning and itching in the inner canthi. Caust. Burning and biting in the right internal canthus. Tart.

Flickering or sparks before the eyes. Caust. Flickering before the eyes. Also: Sparks before the eyes. Tart.

Light obscured as from gauze, as from a thick fog or cloud, momentarily on blowing the nose. Caust. Vanishing of sight. Also: Flickering before the eyes. Tart.

Ears—Roaring or buzzing in the ears. Caust. Roaring in the ear. Also: Fluttering before the ear. Tart.

Words and steps re-echo in her ears. Caust. Not found.

Stitches in the right ear. Caust. Twitching, painful tearing in the right ear in the morning. Also: Twitching-tearing in the right concha in the evening on lying down. Tart.

Nose—Dry coryza with stoppage of the nose. Caust. Catarrhal stoppage of the nose with thick mucous discharge. Also: Catarrh of the left nostril with stoppage of the nose and loss of smell. Tart.

Frequent sneezing. Caust. Violent sneezing five times. Also: Twice hearty sneezing. Also: Sneezing. Tart.

Profuse nose bleed. Caust. Nose bleed at three P.M., followed by fluent coryza with sneezing. Tart.

Face—Transient, violent drawing pain in right cheek and then in the ear. Caust. Sensitive drawing, at last dull pressure on left malar bone. Also: Drawing from the chin along the side of the lower jaw. Tart.

Sensation of tension and pain in the jaws so that she could only with difficulty open the mouth, and could not eat well because a tooth seemed too long. Caust. Drawing from the chin along the right side of lower jaw. Also: Drawing and tearing in the joints. Also: Pain in the root of a tooth in the right lower jaw, as if it were being taken out, which frequently returns. Tart.

Paralysis on the side of the face. Caust. Not found.

Rheumatic pains in lower jaw. Caust. Rheumatic and bruised sensation on rising and shortly before it. Also: Drawing from the chin along the right side of the lower jaw. Tart.

Mouth—Painful looseness and elongation of the teeth. Caust. Pain in the root of a tooth in the right lower jaw, as if it were being taken out, which frequently returns. Tart.

Tearing, stitching toothache. Caust. Violent toothache in the morning. Also: Tearing in three to four teeth in the lower left row, which soon disappears. Tart.

Gums painfully sensitive. Caust. Gums bleed as if scorbutic. Tart.

Painful vesicle on tip of tongue. Caust. Several burning blisters on the left side of tongue. Tart.

Greasy, putrid taste. Caust. Bad taste in the mouth. Also: Very unpleasant taste in the mouth. Tart.

Stuttering, difficult indistinct speech. Caust. Difficult speech. Tart.

Speechlessness from paralysis of organs of speech. Caust. Speechless. Tart.

THROAT—Mucus collects in throat, cannot be raised by hawking, is obliged to swallow it. Caust. Increased mucous secretion in the throat. Also: Much mucus in throat and short breathing. Tart.

Dryness, rawness, scraping, tickling in the throat. Caust. Itching and dryness in the throat. Also: Throat raw, swallowing difficult and painful. Also: Great roughness in the throat. Tart. Also: Violent tickling in air passages provokes a short cough. Tart.

STOMACH—Eructations, burning, hot, empty, tasteless. Caust. Eructations. Also; Empty eructations. Also: Eructations acid, bitter. Also: Eructations sometimes tasteless, sometimes nauseous. Tart.

Pains in stomach relieved by lying down. Caust. Pains in the stomach. Also: Around, below the short ribs, sensitive painful tension, so that he can hardly sit up, but would rather lie. Tart.

Pinching, clawing in pit of stomach on deep breathing. Caust. Creeping sensation in the stomach. Also: Cramps in the stomach. Tart.

Pressure in pit of stomach. Caust. Burning and pressure in stomach. Also: Fullness in the stomach. Also: Sensation as if she had loaded her stomach with something. Also: Pressure in pit of stomach. Tart.

Stitches in hepatic region. Caust. Stitches in the upper abdomen. Tart.

ABDOMEN—Pains in abdomen, causing her to bend double, worse from eating or from tightening the clothes. Caust. After eating, pains in the abdomen aggravated. Also: Violent pains in the epigastrium and over the whole abdomen. Also: The pain in the abdomen causes great restlessness in the whole body, one must constantly move a limb or change position. Tart.

STOOL AND ANUS—Hæmorrhoids, large, hard, stinging, burning, painful when touched, walking unendurable. Caust. Hæmorrhoids. Also: Burning in the anus after stool. Also: Violent tension in the perinæum, specially on walking. Tart.

Frequent passage of offensive flatus. Caust. Frequent offensive flatulence preceded by rumbling and uneasiness in the abdomen. Tart.

Pressure in the rectum. Caust. The pressure in the abdomen becomes sometimes more severe and presses toward the rectum. Tart.

Frequent, sudden, piercing pain in the rectum. Caust. Sudden, violent, alarming stitch in the lower abdomen down through the rectum. Also: Griping and cutting and repeated nausea with empty eructations, with passage of flatus with relief. Tart.

Itching and sticking in rectum. Caust. Sticking pain in rectum. Also: Biting itching over the whole body. Tart.

Itching in the anus. Caust. Biting itching over the whole body. Tart.

Frequent, ineffectual urging to stool. Caust. Desire for stool ineffectual, although the bowels seem full and pressing. Also: After repeated desire, stool. Tart.

Stool passes better while standing. Also: Stool tough and shiny as if greased. Caust. Not found.

URINARY ORGANS—Paralysis of the bladder from long retention of urine. Caust. Retention of urine. Tart.

Involuntary passage of urine at night when asleep; when coughing, sneezing, or blowing the nose. Caust. Frequent desire to urinate. Also: Violent urging to urinate. Also: He can hold his water no longer. Also: Diuresis. Tart.

Burning in urethra. Caust. Burning in urethra while urinating. Also: Violent burning in urethra after urinating. Tart.

Retention of urine with frequent and urgent desire, occasionally a few drops or small quantity may dribble away. Caust. The urging to urinate and the burning in the urethra increase; only a little urine passes, the last drops are bloody and accompanied by violent pain in the bladder. Tart.

Urinates so easily, not sensible of the stream. Caust. Not found.

Urine dark brown, turbid and cloudy on standing. Caust. Urine dark, brownish-red, turbid and with a strong odor. Tart.

MALE ORGANS—Pressive pain, as if crushed in right testicle. Also: During coition blood discharged with the semen from urethra. Caust. Not found.

FEMALE ORGANS—None of the symptoms under this head found in tartar emetic. Four symptoms are given by Cowperthwaite.

RESPIRATORY ORGANS—The laryngeal muscles refuse their service. Cannot speak a loud word. Caust. Speechless. Tart.

Great hoarseness, worse morning and evening with scraping in the throat. Could not speak aloud for several days. Caust. Morning hoarseness. Also: Aggravation at night. Also: Great roughness in the throat, throat raw. Also: Speechless. Tart.

Dry sensation in air passages. Caust. Itching and dryness in throat. Also: Sensation of dryness of the tongue, which is nevertheless moist. Tart.

Cough violent, hollow, at times dry, with pain in the right chest night and morning, with tightly adhering mucus in chest, soreness in chest; tickling in paroxysms with sore sensations in a streak down along the trachea, where every cough pains. Awakes from sleep; caused by crawling or from stooping, always from speaking. Caust. Dry, frequent cough. Also: Difficult cough with some expectoration. Also: Pain in right side behind and at base of chest, aggravated by deep breathing. Also: Cough and hawking of mucus in morning. Also: Cough about two or three A. M., with expectoration. Also: Cough for half an hour before midnight. Difficult cough with some expectoration. Also: Irritation to cough with tough mucus in throat. Also: A paroxysmal, almost sore feeling in chest. Also: Violent tickling in air passages provokes a short cough. Also: About three A. M. she was suffocated and oppressed, and had to sit up to get air. Also: Crawling as of insects above the left mamma. Also: Pain as if bruised in the upper part of the chest, on bending the head forward. Also: On stooping, a fine stitch on the right lower rib. Also: Hoarseness, worse on talking. Tart.

Cough with pain in hip and involuntary discharge of urine. Also: Cough relieved by a swallow of cold water. Caust. Not found.

Shortness of breath precedes the cough. Caust. At the beginning of every paroxysm of coughing she often snuffed

for air, as if she could not get it, before she got the strength to cough. Tart.

Arrest of breath when speaking or walking rapidly; must suddenly catch for breath. Caust. Aggravation from motion. Also: Hoarseness, worse on talking. Also: Respiration difficult, asthmatic. Tart.

Rattling in the chest when coughing. Caust. The mucus rattles in the chest. Tart.

Tightness of chest; must frequently take a deep breath. Caust. Respiration hard, full. Also: Respiration deeper. Also: Constriction of chest. Also: Oppression of chest. Tart.

Soreness in chest. Caust. Pain, as if bruised, in the upper part of chest. Also: An almost sore, paroxysmal feeling in the chest. Tart.

Stitches in the chest. Caust. Long-lasting, painful stitching in the upper left side of the chest. Tart.

NECK AND BACK—Painful stiffness and tension of neck. Caust. Cramp in muscles of neck. Also: On turning the neck and also on taking hold of anything, painful aching, which comes on suddenly and then becomes continuous. Tart.

Sharp stitches in left lumbar region. Caust. Sharp stitches in the region of the kidney on moving the arm. Tart.

Pressing, cramp-like pain in region of kidneys. Caust. A pain in the small of the back, before and on rising from the bed, as if one had carried a weight there; after rising it disappears. Also: Rheumatic pain in the lower part of back. Tart.

In coccyx dull, drawing pains, bruised pains. Caust. Not found.

LIMBS—Paralytic weakness of the limbs; trembling. Caust. Weakness in all limbs. Also: Trembling. Also: Whole body trembled. Tart.

Intolerable weariness in limbs in evening. Caust. Extremities tired and weak. Also: Fatigue in the limbs. Tart.

Arthritic pains in all parts of the limbs. Caust. Tearing and drawing in joints. Also: Tearing and drawing in the extremities. Also: Rheumatic and bruised sensation in the limbs on rising and shortly before it. Tart.

UPPER LIMBS—Trembling of the hands. Caust. Also Tart.

Drawing pains in finger joints. Caust. Fingers firmly contracted down upon the shoulders, with every muscle in an extraordinary state of rigidity. Also: Sensation as if the tendons would contract. Tart.

LOWER LIMBS—Cracking in the limbs when walking. Caust. Not found.

Bruised pain in the thighs and legs. Caust. Rheumatic and bruised sensation in the limbs. Also: Twinging on the anterior surface of the left thigh, as if one pinched him. Also: Soreness in calves. Tart.

Tension and stiffness in hollow of knee when walking. Caust. Tension in the hamstrings on walking. Also: Fatigue in the knees. Tart.

Cramps in the calves in the morning. Caust. Cramps in the calves frequently wake him. Tart.

In ball of great toe; crawling, burning, severe pressive pain, burning stitches. Caust. Not found.

GENERALITIES—At night cannot get a quiet position or lie still a moment. Caust. Restlessness excessive. Also: He gets asleep late and with difficulty, often awakes and tosses about. Tart.

Parts upon which he lies feel bruised. Caust. Not found.

Tearing in joints and bones. Caust. Tearing in all the limbs, the chest, abdomen, testicles and eyes. Tart.

Faint-like sinking of strength. Caust. Great weakness and lassitude. Also: So prostrated that she can only raise her feet with difficulty in the forenoons. Also: Faintness. Tart.

Sour-smelling night-sweats all over. Caust. Profuse perspiration during sleep. Also: Profuse sweat at night. Tart.

SKIN—Itching over the whole body. Caust. Biting itching over the whole body. Tart.

Excessively itching moist tetter on the neck. Caust. A tetter on the inner surface of the left forearm itches violently. Also: Voluptuous itching in the nape of the neck. Tart.

Eruption of pimples on tip of nose. Caust. Rash over the face and whole body. Also: Itching eruption on the skin. Tart.

SLEEP—Uneasy, restless sleep: Caust. He gets asleep late and with difficulty and often awakes and tosses about. Also: Restless sleep. Tart.

Yawning and stretching. Caust. Yawning and stretching the limbs. Tart.

Many motions with arms and legs during sleep. Caust. He had scarcely fallen asleep when he was seized with electric shocks and jerks. Tart.

Intense sleepiness, cannot resist it, must lie down. Caust. Great desire to sleep. Could not get out of bed from sleepiness. Also: So fatigued and prostrated he can scarcely keep himself up. Tart.

Startings from sleep. Caust. She wakes often from anxious dreams. Also: Often wakes and tosses about. Tart.

The comparison of tartaric acid with antimonium tartaricum shows a correspondence of symptoms no less remarkable, but as the drug is not very important, or the proving extensive, it is omitted here to save space.

Under my third head I have to report one of the most remarkable achievements ever credited to a student of homœopathic materia medica. During the years 1861 and 1862, Dr. Thomas Shearer, now of Baltimore, Maryland, was a resident of Charleston, South Carolina, and practiced homœopathy there. He had exhausted all his stock of homœopathic remedies, could buy none in the city, and, owing to the blockade, could not get any from the North. But he found at the drug stores several cases of Humphreys' homœopathic specifics, and knowing that Dr. Humphreys was a well-trained physician, he bought up all of these specifics which he could find. As is well known, these specifics are distinguished by numbers. No. 1 being for fever, congestion, heat, inflammation, pain and restlessness; No. 2 for worm fever, worm colic, voracious appetite and wetting the bed, etc. Dr. Shearer first studied these indications carefully in connection with the materia medica, and wrote out a list of the remedies which *must* be in each pill, those which were *probably* in each pill, and those which were *possibly* in each pill. He then commenced using the pills in his practice, noticing carefully the effects produced, and correcting his list from time to time, as he became convinced that certain remedies were or were not in certain pills. At last he had made out a list for the entire set of specifics in his possession—thirty-three numbers—which he was satisfied was correct.

In 1863, Dr. Shearer ran the blockade, and came to New York, and, while here, he called upon Dr. Humphreys with his list, and asked the latter to tell him how near he had come to the correct composition of the pills. This Dr. Humphreys did. In every one of the thirty-three specifics there were at least two remedies. In most of them there were three, and in some there were five remedies combined. In making the combinations, Dr. Humphreys had used different potencies and different quantities of the various remedies in the same pill. For example: Specific No. 9, for headache, sick headache, vertigo and rush of blood to the head, contained, as then made, three ounces of nux. vom. 3x, three ounces of iris, 1x, two ounces of apis mel., 6x, and one ounce of sulphur, 30x. Specific No. 12, for leucorrhœa, bearing and too profuse menses, contained: carbo. an., 4th, four ounces, nux vom., 6th, two ounces, china, 1st, two ounces, bell., 6th, one ounce, and calc. carb., 3d, ten grains.

A complete list of these specific combinations, as then made, is in my possession, but this is sufficient for illustration. Dr. Shearer had, of course, only aimed to name the drugs in the specifics, not to determine the quantity or potency used, but the comparison of his list with that of Dr. Humphreys' showed *that he had not made one single mistake.* In every case in which he said that a remedy was in a certain pill Dr. Humphreys' recipe showed that it was there. And in every case Dr. Shearer's was a *complete* list of the remedies in the pills except in those pills which contained either apis mellifica, comocladium or canchalagua. Of these remedies Dr. Shearer had never heard up to that time. Apis was proved by Dr. Humphreys; canchalagua was in the fever and ague pill, into which it was put with special reference to the form of that disease common on the Pacific coast, where canchalagua had been proved; and comocladium is, even to-day, a rare remedy, which Dr. Humphreys had introduced into his salt rheum and erysipelas pill. It would be difficult to imagine more convincing proof of the fact that drugs do not lose their efficiency or their peculiar mode of action by being combined and administered at a single dose. And the experiment gives incidental strong proof also of the value of high potencies, for several of the drugs which Dr. Shearer detected were in the thirtieth potency.

But, after all, what is combination but the putting together of drugs at a time a little earlier in the treatment of a case than that often chosen by every homœopathic practitioner? Admitting the truth of the teachings of the books regarding the duration of the action of a drug, does not he truly combine who alternates drugs within the time through which their action continues? Yet such practice is sanctioned by the very best names in the homœopathic school. And is not a true combination effected also by the application of foments, etc., to the skin while drugs are being exhibited internally? For an external application must act through the nerves, if at all, and no other channel is open to the drug; hence in acting at the same time they act in combination; and unquestioned good results have been obtained by such practice.

Passing to my fourth head, I am able to quote such names as Hahnemann, Aegidi, Bœnninghausen, and Lutze in support of the practice of combining drugs. In the Manual of Homœopathic Theory and Practice, designed for physicians and families, by Arthur Lutze, M.D., translated by C. J. Hempel, M.D., and published by Boericke & Tafel, Philadelphia, edition of 1882, I find the following, commencing on the second page of the publishers' announcement, signed by William Radde, Jr., and dated Philadelphia, 1861:

Section VII.—A part of the original work omitted in its proper place. "An important subject is the combination of remedies. As in acute diseases, we often have to give two remedies in alternation, so in chronic cases two remedies may be given, not in alternation, but in combination. * * * In a case of tetter, for example, or debility from loss of blood, sulphur and china may be given in combination, sulphur for the psora and china for the debility, and the result shows that this combination cures much more effectually than either of those drugs if given singly."

The Doctor then warns against the use of drugs in combination for any case unless both drugs are homœopathic to that case, and proceeds: "Any two remedies may be combined if highly potentized, even antidotes. Experience shows that if two antidotes are indicated in a case, they produce striking effects *if given in combination.*" These italics are Dr. Lutze's.

This doctrine of combinations was first announced by Dr. Julius Aegidi, formerly physician to Princess Frederica of Prussia, and later medical counsellor. Dr. Aegidi communicated his ideas to Hahnemann in 1833, "corroborated by two hundred and thirty-three cures with combined remedies; and the announcement was joyfully received by Hahnemann, but kept secret from the public by the imbecility of the foes of truth."

Hahnemann's letter to Dr. Aegidi, under date of May 15, 1833, is translated thus:

"DEAR FRIEND AND COLLEAGUE:

"Do not suppose that I reject anything good from mere prejudice, or because it might lead to modification in my doctrine. All I desire is the truth, and I know that this is all you care for. I am rejoiced that you should have had such a happy thought, at the same time confining its execution to proper limits. Two remedies should only be given in combination in a highly potentized form, provided each is, in its own way, homœopathic to the case. In such a case this proceeding is an

advantage to our art which should not be repudiated. I shall take the first opportunity of making a trial, and I doubt not that it will be successful.

"I am likewise glad to hear that Bœnninghausen approves of this plan. I believe that two remedies may be given in combination, which we do even now, when sulphur and calcarea are given in combination, in the form of hepar sulphur; or sulphur and mercury when cinnabaris is administered. Permit me to communicate your discovery to the world in the fifth edition of the "Organon," which is shortly to appear. Until then, please keep this discovery to yourself, and request Dr. Jahr, whom I esteem very highly, to do the same At the same time I shall protest and earnestly warn against the arbitrary combination of any two drugs indiscriminately.

"Truly yours, S. HAHNEMANN."

In another letter to Dr. Aegidi, dated June 19, Hahnemann says that he has devoted a paragraph in the fifth edition of the "Organon" specially to this matter, and that he had sent the MSS. to Arnold, the night before, with request to print speedily. But the "Organon" contains no such paragraph. Dr. Lutze explains this by saying that Hahnemann laid the new idea before a meeting of homœopathic physicians on the 10th of August, 1833. Although the number of homœopaths was small there were many in the ranks of the school who were full of prejudice, and who heaped ridicule and opposition on the new doctrine, saying that it was a return to the allopathic plan of mixing up drugs indiscriminately. They succeeded in persuading Hahnemann to abandon the publication of this innovation and even to allow one of his friends, who was to pass through Dresden, to suppress the paragraph which had been already printed.

Dr. Lutze explains that he got the idea of combining drugs directly from Aegidi, and that the latter published his views on the subject in volume XIV. of the "Archives," which, appeared in 1834.

Dr. Lutze cites at length some fifteen cases in which he had used combined remedies with signal success. He gives some illustrations of combinations found useful outside the realm of drugs, and says that Hahnemann's idea that combination was exemplified by such drugs as hepar was wrong, because the chemical union of crude drugs, before potentizing, is not the same thing as combining remedies already potentized. His grounds for this opinion he does not give, and the comparisons which I have reported in the present paper tend to prove that his opinion was not well founded. The idea, too, that combination must be restricted to high potencies, seems to have been jumped at by men who were inclined to ascribe almost supernatural power to high potencies, because of their comparatively recent discovery that such potencies were effective, and because of their seeming inability to reduce their doses to such a point that they should lose their characteristic action. The experiment of Dr. Shearer, quoted above, tends to show that the question of potency has no relation to that of combination; for the Humphreys specifics contain, in several instances, drugs in the first and in the thirtieth decimal dilution in the same pill, and tinctures, firsts, thirds, fourths, sixths, twelfths, twenty-fourths, and thirtieths seem to be used without much discrimination in compounding these specifics.

On my fifth and last head I have but a few suggestions to offer. It is claimed by those who uphold the doctrine of the single remedy, that it is "unscientific" to combine drugs, and that the physician who does it does not improve as a prescriber, because he does not know which remedy of those in the pill effected the cure and is therefore no better able to select a simple for the next case of the same character which comes into his hands. These objections seem to me to rest upon several misapprehensions; *first*, as to the meaning of the words "science," or "scientific," as applied to medical practice; *second*, that it must be the physician's ultimate aim to select a simple for the treatment of each disease with which he may come in contact; *third*, that diseases have a relation to drugs more subtle and spiritual than is implied by the fact that both the disease and the drug produce similar symptoms, and hence that a person can have but one drug disease at a time and that but one drug can meet and cure that disease,—an idea that has sprung from some of the theories advanced in the attempt to explain the well-nigh unaccountable fact that the small doses of homœopathy do produce cures; and, *fourth*, that it is a physician's duty to learn his art through his patients. If a patient calls upon a physician and presents a train of symptoms, part of which call for, say, arsenicum and another part call for bryonia, two courses are open to the physician. He may either give one of those remedies, or he may give both in combination. Suppose he gives bryonia for two weeks without apparent success in curing his case and then gives arsenic for two weeks and effects his object, he may think that he has learned that arsenic was the remedy and may treat the next case like it with arsenic, only to learn from this that bryonia is the remedy; whereas if he had combined the drugs in the first place he would have cured his case in less time and would have learned at least that arsenic and bryonia are the remedies in such cases. Medicine is not a science, but it is certain that there is room in it for a scientific observation of facts, and it would hardly seem less scientific to observe facts about combined than about simple remedies.

It is the physician's first and highest duty to cure his patients in the least possible time. He would indeed be unworthy a place in the ranks of so noble a profession who did not avail himself of every opportunity to increase his store of knowledge, especially

of such knowledge as would be of direct service to him in his practice; but how much more unworthy must he be considered who would sacrifice, or delay for a moment the recovery of his patient, that he might thereby increase his store of knowledge! It is the glory of homœopathy, as contrasted with the older school of practice, that she gains her knowledge by experiments upon the healthy, by the sufferings of those who voluntarily submit to the pains incident to taking poison that they may increase the world's knowledge and aid in the noble work of alleviating sickness. Let our old school friends treat patients for the purpose of learning their art—that is the way they profess to learn it. But let us study our materia medicas faithfully and then combine our remedies or use them singly, as in our best judgment shall seem most for the advantage of our patients, never forgetting to keep our eyes open that we may drink in as much as possible of the knowledge that God has provided so abundantly for those who are ready to receive, and laboring always to use all to His glory and the good of His creatures, as He shall afford us opportunity.

FURTHER SOURCES OF MISAPPREHENSION AND OBSCURITY IN PELVIC ETIOLOGY.

BY GEO. H. TAYLOR, M.D.

FLUIDS greatly predominate over other physical forms of matter in the pelvis as well as in the organism. Blood coursing in its channels throughout the system is most abundant in the pelvic vessels; the local capillary reticulations are numerous; the interstitial fluids interchanging therewith seem ever ready for overflow at the least morbid provocation. It follows that the pathology and therapeutics of the pelvic contents can hardly be well understood without having carefully traced the uses and destiny of this most abundant constituent of the pelvic contents, its fluid parts. Fluids are the real medium of vital changes, pathological and physiological; and a true pathology discovers the embarrassments and the interruptions to which the fluids are liable, and the physical as well as the vital laws to which they are subject.

This being done, the primary pelvic pathology is mastered, and direct and radical therapeutics naturally and inevitably follows. Minor, and even major gynecology is reduced to its primary elements.

It has been shown in the preceding article, how the organs of the pelvis, as defined masses of substance, of which the rectum, uterus, etc., are examples, are exposed to mechanical displacement or dislodgement from their true location, in proportion to the abatement of the natural or physiological restraining force upon which sustentation depends.

This force acts with equal certainty and energy on the fluids. These are mobile, yielding to whatever force happens to preponderate. While the amount of solid constituent is fixed by the size of the organs, that of the fluid depends momentarily on the efficacy of the forces controlling them. The physiological integrity of the organs depends on that of the fluids, and when we are acquainted with nature's mode of disposing of these, we have the key to the pathological situation.

Pathology is, in general, but a deviation, usually a lesser degree of physiology; and the facts pertaining to the latter are first and particularly to be noted, and the same principles applied to the fluid as to solid forms of matter.

It has been shown that the organic rhythm extends in health, downward; and thoroughly pervades the contents of both the abdomen and the pelvis. The continuity of the cavity renders this mechanical effect indivisible, as relates to the contents of the common cavity.

The immense lifting effect, easily procurable by the various degrees of exaggeration of the action of the mechanism connected with rhythm, has been fully represented in its proper connection. The slightest observation of the operation of the mechanism having this end in view, shows clearly and beyond all cavil that the dominance of the mechanico-physiological apparatus is as pronounced in disease as in health. There is a rhythmic perturbation of the pelvic contents, which has also been shown to extend to the brain, at every healthful respiratory act. This, as respects the pelvis, does not and cannot exist in pathological conditions of these parts, whether the form of pathology be incipient and mechanical, or advanced and organic. In other words, pathology, in its wider sense in its application to the pelvis, involves mechanico-physiological facts and principles.

The fluids are in incessant mechanical change. Local nutrition demands equal facility of inflow and outflow. The mobility of fluids, under mechanical impulse, is immeasurably greater than that of solids, for these yield in their minutest parts, while solids require sufficient force to overcome the inertia of masses. The abatement of these impelling causes, therefore, produces inertia that pervades the solid parts. The fluids of the body have little or no control over their destiny. They have little inherent power of locomotion; they are the sport and the victim of the circumstances which control them. It is mainly exterior conditions that either supply or withhold impulsion.

Blood reaches the pelvis for the nutritive support of its organs, as it does all other parts, through the arterial channels from the heart, under the incentives of local demand. The local provision, as has been

shown, is extraordinary in women, to comply with corresponding possible needs.

Such abundant provision for probable local pelvic requirements involves equivalent provisions for outflow of fluids. During all the perturbations to which the time being is subject, the inflow and outflow require to be in a state of equipoise.

One of these provisions is local waste, which is well known to be extraordinary in the human female. The monthly flow is a necessary part of the uses of the sexual provision. The capillary reticulations of the pelvic organs are normally adapted to extreme perturbations; now greatly distended, and again contracted to an extreme. The periodicity of these perturbations is the marked feature. The fecundating power is maintained through this appointed means.

The other principal agency for removing that portion of the blood from the pelvis that has become venous, is identical with that which supplies sustentation, viz., the mechanical. The column of blood is *lifted* in its proper venous channels coincidently with the same effect experienced by solid pelvic parts. The mechanism of the circulation brings new supplies to these vessels for every rhythmic action. This action, therefore, secures uninterrupted outflow from the reservoir formed by the capillary reticulations with which the pelvis is so abundantly provided.

The mechanism devoted to this purpose embraces the whole trunk, and frequent emergencies require the whole. When the force of all its muscles are called into full operation it is resolved into an hydraulic engine of extraordinary power. The efficiency of this mechanical device is proven by its capacity to move upward and to sustain against gravitation the whole mass of interior digestive organs and appendages, with whatever additional resistance may be imposed by the emergencies of position and of avocation. It acts incessantly, no less in sleeping than in waking; is automatic, and independent of care, anxiety, or the will. Its location is immediately *above* the work to which it is devoted; in practice, found to be the most suitable mechanical arrangement for a pumping mechanism. This mechanism exists in every animal and demonstrates its power and efficacy in the health with which its action is intimately connected. This is the ordinary agency for the constant removal of venous blood from the pelvis. Hyperæmia is necessarily present or imminent whenever the provision is inefficient. We can now see the absolute and unqualified necessity for its unintermitting operation, since it is by its continuous though silent power that the periodical hyperæmia incident to the generative intestine of women is prevented from lapsing into permanency.

And the evidences are direct and unequivocal that, when permanent morbid hyperæmia supervenes, it is always accompanied by an abatement of the extension of the respiratory rhythm to the affected parts.

The enormous capacity of this mechanism for extending its power and scope under emergencies has been shown in a preceding chapter. This is done by temporarily changing the control of the action of the mechanism from automatism to design. Under such prescribed circumstances it becomes an unparalleled remedial power, capable of removing the prolonged hyperæmia incident to chronic disease of the pelvic organs, and of maintaining automatic permanency. Its work may, through persistent cultivation, exceed the bounds of health; it may even cause suspension of the natural periodic hyperæmia, and may be applied to this use if, from a medical point of view, this effect becomes desirable.

The correctness of the above statements, showing the design of the mechanism for obviating, and when necessary, for removing pelvic hyperæmia, and its complete adequacy to produce this effect in whatever degree, is further shown by analogy. The pelvis does not furnish a unique situation. Another not less important portion of the organism clearly depends on the same cause to secure similar effects. This is the head. Like the pelvis, the head is securely enclosed by inflexible bone. Like the pelvis, no exterior muscles are capable of compressing its vessels to aid the venous blood-flow, as is the case with other portions of the body. The head has no interior muscles to contribute to the same effect. The interior muscles of the pelvis have no power or adaptation to control the blood outside of their own substance; the remainder is amenable to the same control as that of the head; or, when that fails, as in chronic pelvic affections, to none at all.

It is therefore clear that any form of pelvic disease growing out of hyperæmia, or having hyperæmia as its initial stage, is always imminent whenever the mechanico-physiological processes designed and adapted by nature to complete the circulation of blood in the pelvic region, are in abeyance. All inadequacy at this point is immediately reported in the form of local symptoms.

The primary form of the consequences of imperfect return of the venous blood of the pelvic region, consists of distension of the local capillary vessels, thinning of their walls, diminution and stagnation of the capillary currents, effusion or loss of contractile power of some portion of the enormous capillary network distributed to the pelvic organs. The cause of pelvic hyperæmia, and the primary consequences of this cause, being understood, the special derivative forms of morbid phenomena which follow are more easily comprehended. It is these latter only which afford concern to the patient, and from which relief is de-

manded. There is usually an innocent and refreshing unconsciousness of the existence even, of a primary and causative stage of pelvic affections on the part of the patient. Even physicians are inclined to devote first attention to subordinate and derivative effects, sometimes only incidental symptoms, to the neglect of the causes from which they derive their power to annoy.

It may be well for the student of pelvic pathology to have at least a theoretic idea or plan of the succession of the progressive stages of morbid pelvic phenomena. This may in some degree aid the comprehension of individual cases in practice. The difficulty in accurately predicting the kind of pelvic affection which will arise in a given case, is that imposed by individuality of temperament and constitution, the effect of whose combination with the primary and essential factor is beyond estimation. But to regard acknowledged facts of pathology as hypothetical stages of morbid development will be of use in fixing the primary principles and their leading therapeutic importance.

1. First in order are defective organic rhythm, defective sustentation, defective return circulation dominated by organic rhythm, defective muscular nutrition.

2. Hyperæmia, distension of capillaries pervading the whole pelvis, or some portion thereof, as the uterus, the ovaries, the fallopian tubes, or segments of these separate parts, as the uterine neck or fundus, anterior or posterior, its body similarly in distinct portions; and so of the remainder of the generative intestine. Resulting from and indicative of this condition are:

(*a*) Excessive periodical discharges. Unperiodical discharges.

(*b*) Alternative of the above is increase of weight and change of position of the pelvic organs. Constitutional evidences of weakness.

3. Advanced stages of hyperæmia, loss of contractive power of capillary walls, cellulitis, local chronic inflammation of some portion of the generative intestine.

(*a*) More abundant discharges, periodical and unperiodical, with morbid qualities of both; more frequent periodicity; ulceration of os.

(*b*) Alternating with the above are the hyperplasiæ.

(*c*) Great nervous complications, manifested in cerebral or spinal suffering; rhythm very feeble.

4. Increase of all symptoms, local and general; neoplasms; hardness and weight of some portion of the uterus, or the ovaries increased; periodicity nearly abolished.

(*a*) Irritability and hypernutrition of nerve centres, cerebral and spinal, and abolition of muscular power; rhythm below the diaphragm abolished.

The above-noted manifestations of pelvic disease are more correctly understood as being varieties of essentially the same thing, in different stages of development. They have no independent existence, but are forced upon the pelvic organs by dominating conditions, chiefly those relating to sustentation, or what is practically the same, the defective return of the venous circulation, which at this portion of the organism depends upon the same cause. Hyperæmia is the initial stage, other manifestations are outgrowths and variations derived therefrom, providing the requisite time is afforded.

Although these variations are found diversified without end, by causes relating to the individual, such as temperament, inheritance, nervous peculiarities, social position, etc., yet the different expressions by no means argue the necessity for different remedies, because all alike are subordinate and dependent.

The reason may now be more forcibly understood why those afflicted with pelvic affections require local remedial attentions, almost without limit. These afflictions practically appear to be perennial, in spite of the most assiduous care. The reason lies in the simple fact that only palliative and not radical remedies are employed; these are constantly addressed to the effects mentioned, which, however completely disposed of, as constantly reappear, the natural onflow from the same inexhaustible fountain. The fundamental factor of the disease remains untouched. This does not reside in the pelvis, but in parts quite above and far beyond the possible reach of the remedies employed. The consequences located in the pelvis may suffer temporary check, but while the causes are ignored there is constant reproduction of the effect, whatever new form it may assume.

Remedial measures of necessity correspond with physiological possibilities. Remedies imply channels and modes of activity, and their force and value are limited by these, rather than by their inherent or intrinsic power. Remedies resemble legal contracts, which have no binding force till subscribed to by all the parties.

It has been shown that nature provides two ways of removing excess of fluids from the pelvic conduits: the periodic, and the rhythmic and constant. Now, these local phenomena, and an unlimited variety unenumerated, the secondary consequences of defective onflow and outflow, are easily mitigated by the unperiodical outflow, which constitutes leucorrhœal effusion. Other morbid alternatives are easily the pathological equivalent of leucorrhœal losses, for morbid pelvic phenomena are correlatives of these causes—what must occur in some form or other, under the circumstances.

Two remedial resources are therefore plainly open. One is that of restoring the physiological power nec-

essary for the control of the pelvic venous circulation. This is health. The other is to *initiate* nature in securing by art an *un*periodic flow, outward and onward, in mitigation of pelvic hyperæmia. The onward flow of blood in the capillaries is doubtless temporarily aided by the impulse to contraction of their walls, derived from a great variety of local irritants; while a local leucorrhœal outflow is readily superinduced by the same device. The alternative principle is seized upon by the gynecologist, to the neglect of nature's positive mechanism. The accessible parts of the female generative intestine are therefore habitually belabored and tortured in consequence of faults which really exist somewhere else, and which demand an altogether different remedy.

The benefactions of the grateful patient are evoked by seeming as well as by real benefits. Relief, however temporary, is felt to be a boon; inquiries as to its nature and permanency are not pertinent. Knowledge, coming through individual experience, comes too slowly for personal advantage. If the facts of experience could be available in time, little toleration would be given to the process of driving local hyperæmia from point to point, and allowing the average essential morbid condition to remain unchanged.

The nature of the case, as it has been herein presented, admits of but one actual remedy. This consists of such measures as are capable of improving the power and extent of the mechanico-physiological action, through defect of which the consequences above detailed have become possible. This form of remedy, unlike all others proposed and employed, cuts off disease at its source; it therefore renders the maintenance of the derivative consequences of local hyperæmia, as well as the morbid positions of the pelvic organs, impossible.

The author will be pardoned an expression of gratification at the many evidences that the medical profession, or at least the nobler portion of it, is gradually assuming ground and accepting principles which he has for many years practically advocated. The loss of faith in the radical efficacy of the usual local remedies appears to precede, by a goodly distance, a perception of verity of the well-proved physiological form of remedy herein set forth. One of these evidences, contained in a recent number of the *Medical Journal*, by the editor, is appropriately quoted.

In a recent lecture before the New York Clinical Society, Dr. Frank P. Foster, speaking of the necessity of remedying pelvic affections through their causes rather than the effects, says: "So far as my own experience goes, I have met with far more success by following this course, than by seeking the more obvious derangements, whether versions, flexions, hemorrhages, discharges, stenosis, or any of the other conditions that are usually the direct source of complaint. If I stood altogether alone in these views I should hesitate to put them forward as of any importance, but I may be permitted to say that, for several years past, Dr. Emmet has virtually given up intra-uterine medication in the treatment of endometritis; operations designed to open and enlarge the uterine canal are falling into disuse; the flexion theory of dysmenorrhœa is drawing to its downfall; and it is beginning to be felt that the curette is not all-powerful.

"But it is not alone the useless from which these considerations should warn us to desist; some of the therapeutic measures that have been much resorted to are injurious, especially when there is a tendency for the slumbering inflammation of the serous and cellular tissues of the pelvis to break out into an acute affection. I will mention only that one of them which is probably considered by many the one least likely to cause trouble—the operation of replacing the uterus by means of an instrument. I doubt if there are many who will agree with me in the statement that this procedure is unwarrantable under all circumstances, but that is my firm conviction. The leverage afforded by an instrument like a sound, passed into the uterus, to a certain extent unguided and unrestrained by the sense of touch, is certainly capable of doing much damage. * * * * There seems to be a mania for instrumental interference among those whose knowledge of the pathology and diagnosis of pelvic diseases is very limited. It is to be hoped that this state of things will pass away when gynecology takes its place on the plane reached by the other practical branches of medicine."

PROF. HUGHES ON MAGNETISM.—In a recent paper before the Royal Society, Prof. Hughes dealt with the discovery of the presence, in the interior of a magnet, of waves of opposite magnetic polarity, which balance each other when there is neutrality. He also deduces the practical result, that very thin magnets have greater residual magnetism than thick ones; thick ones have more magnetic inertia and take longer to magnetize. Bundles of wires are better than solid cores, because they take a higher degree of magnetism, owing to surface exposure, and this is not proportionately counteracted by their higher residual magnetism. Prof. Hughes is also of opinion that all matter and even ether, has inherent magnetic polarity and a saturation point. The curve of saturation in the atmosphere is the same in character as that of iron.

SWALLOWED A BONE.—A medical man writes to the *Druggists' Circular* that, while eating mutton stew, he was so unfortunate as to swallow a piece of bone, large and sharp-pointed. Being puzzled what to do for it, he began to experiment, with this fortunate result. He found that Boudault's *pepsin* (20 grains) and ten drops of *muriatic acid, C. P.*, in a tablespoonful of lukewarm water, rapidly softened the gelatin of the bone, and converted the calcareous matter into a very small minimum. Three such doses gave great relief, and in half an hour he was perfectly easy in mind and body, and has suffered no bad effects from the accident.

CLINIQUE.

SARCOMA OF THE SCAPULA.

BY G. A. HALL, M. D., CHICAGO.*

MR. R., aged 22, appeared at the Surgical Clinique of Hahnemann Hospital, March 30th, 1884, for an examination of his shoulder, which was very much enlarged. On divesting the patient of all clothing as far as the waist, there was noticed a marked prominence of the supra-mammary and infra-clavicular regions, which also filled up the axillary space. The young man was an athlete, and had for many years practiced in the gymnasium. He was of medium size, straight, square shouldered, possessing a full, deep chest, and was withal a perfect model in muscular development. Pressing my fingers into the axillary triangle, I could feel the outlines of the growth pushing the latissimus dorsi backward and the pectoralis major forward; it mounted up over the clavicle, so as to cause a conspicuous prominence of this entire locality. The general health of the patient had always been excellent, enabling him to discharge his duties as a clerk until two months previous to his appearance, when he was obliged to abandon his vocation, as he found the use of his arm in writing caused a dull, heavy pain in the axillary region, through his shoulder and down his arm.

I was impressed with the gravity of the case, and felt confident that the growth belonged to the malignant family, but I was not entirely satisfied as to whether it was an encephaloma or a cysto-sarcoma.† The precise origin and attachments of the growth were not easily determined, and could they have been, I am sanguine the mode and result of the operation would have been different. My impression was, that it started from the fascia of the pectoralis minor. We learned from the history of the case, that three years before, while playing ball, he received a severe blow in this locality from a swift ball. Six months after this injury, he detected a slight fullness in the supra-mammary region. It was unattended with pain or inconvenience; consequently it did not excite the least suspicion on his part, and it was allowed to continue its insidious march until a few weeks before he consulted me, when he experienced the pain and disability before described.

Feeling confident of my diagnosis, I could recommend but one alternative, and that was, extirpation of the entire mass at the earliest possible moment. Acting accordingly, on the 7th day of April the patient was placed under the influence of chloroform, and in the presence of Drs. G. F. Shears, J. B. Johnson, M. Hislop, E. W. Boardman and T. G. Chapman, I proceeded to operate.

The first incision was along the inferior border of the pectoralis major to its insertion. Passing through the integument and fascia, I came directly upon the tumor. It was easily separated from the underside of this muscle, and my hand passed freely over its anterior surface, although it was firmly anchored below. I then made an incision along the clavicular line from the sternal to the acromial extremity, and dissected away the sub-clavicular attachments of the growth, and yet it was still immovable. The pectoralis major, which was tensely stretched over the tumor, was then divided, exposing the brachial plexus and blood vessels which had been displaced forward some five inches.

Not being able yet to determine the origin of the growth, I began on its inferior border and carefully dissected up into the axilla, until I could nearly place my fingers on the neck of the scapula. Being now convinced that the primary origin was from the neck of the scapula, and that it now involved the entire joint, the removal of the arm seemed an imperative necessity, and was quickly accomplished. I then excised the external third of the body of the scapula, embracing both processes, together with the acromial half of the clavicle, which also was implicated.

The sub-clavian artery was ligated early in the operation, but even with this precaution there was a large amount of venous hemorrhage. This was fully controlled; the edges of wound approximated by wire suture; free drainage insured, and the wound dressed antiseptically. The patient came from under the influence of the anæsthetic, but, in spite of our best-directed efforts, he failed to rally from the shock of the operation, and expired a few hours after its completion.

My conviction, that the primary attachment of the tumor was the fascia of the pectoralis minor, was greatly strengthened by reason of having had a short time before a case almost identical with this one in its history and the size and location of the growth, the subject being above 40 years of age. I performed an operation similar to the one before described, from which the patient rapidly recovered.

Could the origin of the growth in the previous case have been more exactly determined, and the arm removed, together with a portion of the scapula and clavicle, without unnecessary dissection, there would have been less shock and hemorrhage, and the result, I am convinced, would have been different. Another factor which I am confident hastened his death, was the depressing effect produced by the chloroform. During the early portion of the operation he sank into a collapse, attributable, without question, to the anæsthetic, and therefore ether was substituted for it, with but little or no improvement.

* NOTE.—This paper was prepared to be read before the New York County Medical Society, but unfortunately arrived a few days after the meeting had been held. It is published now on account of the interesting pathological features it possesses.
WM. TOD HELMUTH, M.D.,
Chairman Bureau of Surgery.

† Subsequent examination proved it to be a round-celled sarcoma.

LIKEE GYNECOLOGEE, ALLEE SAMEE: HYDROCELE—CASTRATION.

By Phil. Porter, M. D., Detroit, Mich.

Dr. Helmuth's preface to "Contributions to Gynecological Surgery" will also answer for our apology for drifting into general surgery. He says, "While making no pretensions to gynecology, the author of this paper has always felt the deepest interest in that department." Permit us to substitute surgery in the place of gynecology, and we will report the case.

Mr. S., aged 56, had a hydrocele of ten years' standing. Tapping had been resorted to from time to time, but all advice relative to a radical treatment was not accepted. Last May he called upon a physician (allopathic) to have the fluid evacuated; and here was the beginning of his trouble. This physician, whose stock in trade consisted in the fact that he had "been a surgeon in the army," suggested an injection of iodine, which was permitted. Three days after this operation we were called, and found the scrotum swollen to an enormous size, and the patient suffering great pain in the testicle, which was enlarged to the size of a lemon. We immediately strapped the mass well up on the abdomen, and applied hot emollients of crushed poppy heads, and elevated the foot of the bed. In three days all of the inflammation had subsided from the scrotum, but left the testicle extremely painful. Keeping the patient on his back, we devoted two weeks to a most thorough course of therapeutical treatment, selecting such remedies as we thought came under the similium, or that were indicated by the pathological condition; but no relief was obtained, and he insisted on "having something done."

His symptoms were not encouraging, to say the least, presenting as they did the appearance of septic poisoning; so we advised an operation, by which we were to remove the testicle, if we found it necessary on opening the scrotum. This was assented to, and with the help of Drs. R. C. Olin, Wm. Bailey and H. H. Crippen, we opened the scrotum, or in other words tried to, for the different layers, from the skin to the tunica vaginalis of the testicle, were very closely adherent. But with careful work, however, we released the testicle from its bed of adhesions without destroying the septum of the scrotum. On examination the testicle was found tense, elastic and fluctuating; on puncturing the organ, pus escaped of a greenish color, loaded down with débris from the broken-down tissue of the testicle. The centre of the gland had lost all of its normal structure, so we concluded to remove the entire mass.

Passing a silk ligature through the spermatic cord just above where we determined to separate it, to prevent it from retracting beyond our reach when it was divided, we applied a clamp and removed the testicle with the scissors. Turning up the end of the cord we cauterized the stump thoroughly up to the clamp—nearly three-quarters of an inch—burning the end almost to a crisp. The charred parts were then carefully trimmed off and the clamp removed. No hemorrhage followed. The silk cord was left to be used in case of secondary hemorrhage, and the scrotal incision closed with uninterrupted silver sutures. Drainage was provided for with several silk threads left in the bottom of the wound, the ends projecting from the lower angle of the incision.

Not having any authority for treating the spermatic cord in this manner for castration, all emergencies were provided for. The result of this method of treating the cord was highly gratifying to the end. The patient's temperature remained normal, and although he vomited incessantly for twenty-four hours from the effect of the chloroform, no pain or hemorrhage followed, and he was out of bed in six days. The thread left in the spermatic cord was withdrawn on the fourth day, as also were the drainage threads.

We report the case more to show how slight an operation, such as injecting the scrotum, may prove to be a very dangerous procedure.

This physician, who had "been a surgeon in the army," no doubt performed the operation of tapping and injecting correctly, as he followed the "law laid down in the books" for the cure of hydrocele, to a letter.

The other point we wish to make is not especially a new one, but nevertheless new to us—*cauterization of the cord.*

Whenever we wish to avoid leaving any foreign bodies in a closed cavity or wound, we use cautery, and for the last few years it has given perfect results; no sloughing or pain ever follows.

NATRUM MURIATICUM (SODIUM CHLORIDE).

By H. R. Stiles, M.D., New York.

Soon after the beginning of my acquaintance with Schüssler's system of bio-chemic treatment, I was consulted by a woman about forty years of age, who complained *solely* of an intolerable sense of chilliness around the middle of the body, constantly present, though worse at night, and from which she had suffered for some six weeks. I spent a good half hour (evidently to her surprise) in diagnosing her case, but utterly failed to find any possible or probable cause, her health being apparently perfect in every respect. Thus foiled in my search for a cause, I had simply to face the symptom.

Now, from the friend who kindly acted as my

mentor in the use of these tissue-salt remedies (for, at that time, 1878, we had not in English the full text of Schüssler's "New Treatment,") I had already learned to associate *natrum muriaticum* with what (in the two English editions of 1884) Schüssler terms "*chilliness*, and almost habitual feeling of cold in the back, with characteristic appearance of tongue," etc. This "characteristic appearance" of tongue, "clear, slimy coating, with small bubbles of frothy saliva along the sides," this patient also had. So I gave her nat. mur., 6th cent. trituration, a two-grain powder every three hours.

At the end of two weeks she reported herself to me as perfectly cured. This most disagreeable feeling, from which she had suffered for six weeks, had yielded in one week's time, although she had continued its use a week longer in order to "make sure."

In Dr. Burnett's monograph on natrum muriaticum, published after my experience as above recorded, the reader will find, as his Observation xiv., the case of a gentleman cured by this remedy in twelve days, of "a general feeling of chilliness," which he had had "for more than two years, with sleepiness and drowsiness after dinner for two months." Burnett's cases, xix., xx., xxiv. and xxv. (especially the three latter), also bring out this symptom of coldness very clearly.

From my experience with natrum mur. (largely during a residence on the east coast of Scotland, where there were the same atmospheric conditions as existed on the opposite side of the German Ocean at Oldenburg, where Schüssler resides) I have learned to associate with this remedy the following points: (1) the abnormal chilliness, and (2) the characteristic appearance of the tongue above referred to; (3) an aggravation of symptoms at the seaside, and (4) an aggravation of some symptoms in cold, and their amelioration in warm weather.

If, in addition to this, we consider (looking at the remedy Schüssler-wise) that natrum muriaticum, or sodium chloride, as he calls it, "is a constituent of all liquid and solid parts of the body; and that a disturbance in the motion of the molecules of this salt causes a change in the *watery contents* of such tissues," giving rise to flow of saliva, increased secretion of tears, vomiting of watery fluids (not acids), sometimes with transparent, stringy, tough mucus accompanying, etc., etc. (the transparent, *watery* character of secretions being always "to the fore"), we cannot be at a loss where to apply this remedy in practice. Natrum muriaticum is by no means a new remedy. Much has been written about it from a homœopathic standpoint; but it may also be as well to notice these indices furnished by the Tissue-Remedy Therapeutics of Schüssler.

REMARKABLE RECOVERY FROM INJURY.

DR. I. E. NAGLE, of Asbury Park, N. J., has kindly forwarded to us the following report, which was sent to him by Dr. John H. Williams, of Asheville, N. C., in whose practice the case occurred:

On the night of July 27, 1879, a shoemaker named Tom Norville, was waylaid, about midnight, in the north end of Asheville, in a lonely hollow, and cut, shot, and beaten with a club, and left for dead. He was not found till 5:30 A.M., July 28. When I arrived I found the man with a depressed fracture of the right parietal bone, a pistol shot in right lung, entering just below right nipple and ranging directly backward, lodging somewhere in the lung, and the ball was never found. Three gashes in the throat, one of which entirely cut through the larynx, cutting through the thyroid cartilage just above the vocal cords and opening into the pharynx just at the beginning of the œsophagus. Another stab in left side between sixth and seventh ribs, in axillary line, penetrating the lung. Another stab in right lumbar region, penetrating the kidney; and, besides these, he had cuts and stabs in the arms, legs, and all over the back, none of which were very deep, but the aggregate number of cuts, shots, etc., numbered 83 by actual count.

I cleared out the blood and dust from the trachea with uterine dressing forceps, and cotton, closed the opening in the pharynx with continuous sutures, tied three or four cervical vessels, and brought together the cartilage of larynx with silver wire, bringing the parts into as accurate apposition as possible, closed the openings in the skin with silk sutures, then gave water *ad libitum*, through a rubber catheter. Fed through that for a week. Had trouble from stab in lung, from emphysema, which was relieved with compress. The urine trickled through the stab in the kidney for two days, and was finally plugged with lint, steeped in balsam Peru. I dressed the other cuts with sutures and rubber adhesive plaster.

Finally, I ceased attendance on the 10th of August —altogether 14 days. The man has tolerable control of the voice, though it is rough and rhonchus. Limps slightly from a stab in left thigh, which injured sciatic nerve. He is now working at his trade. I should have stated, also, that I elevated the depressed bone in the skull, by picking out some pieces of bone at one of the angles of the wound, and raising with an elevator. The *Police Gazette* published a portrait of the man a week or so afterwards, under the heading of "A man who was not born to be killed."

These facts can be substantiated, by the profession here, and are a matter of record in the courts, as the assailants were arrested after a long search, tried, and one of them convicted and sent to the Penitentiary.

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"*A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and* OUGHT *to be the* ONLY ACKNOWLEDGED RIGHT *of an individual to the exercise and honors of his profession.*"—Code of Medical Ethics, Amer. Med. Ass., Art. iv., Sec. 1.

Our practice is *not* "based on an exclusive dogma, to the *rejection* of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry."

QUITE CORRECT, MR. "MEDICAL RECORD!"

WE have more than once had occasion to admire and commend the candor and intelligence with which the *Medical Record* occasionally treats, when it chances to be in a happy frame of mind, some of the great medical questions of the day. We were not prepared, however, for so wide a departure from the traditions and practice of its school, so clear a foresight of the future, and such an utter disregard of consequences, as when it boldly avows that "homœopathy should be taught in all medical colleges, as a branch of historical medicine or psychological therapeutics," and asserts "that in that direction matters are rapidly tending." We are aware that the *Medical Record* has for some time been foraging, with very evident satisfaction both to itself and its readers, in the rich fields of homœopathic literature, publishing in successive numbers gleanings from the homœopathic materia medica, recommending in dysentery merc-cor. in the 160th of a grain, in alternation with colocynth half-hourly in the 80th of a drop, and also the 10,000th part of a grain of merc-cor. as an antiseptic; noting wonderful cures performed by drosera in whooping cough, by ipecac in minute doses in certain forms of nausea and vomiting, and by hepar-sulph. and a score of other remedies when specially indicated, whose therapeutic action has been so clearly set forth in our works on materia medica. We are not sure but what Fraser, in his excellent tablets, in which the drug is first thoroughly triturated with milk sugar, Warner in his parvules, and nearly all the manufacturing chemists, in their delicately-prepared granules representing infinitesimal portions of medicine up to the 1,000th of a grain, have contributed something to the advanced spirit of our contemporary, by placing facilities in its way of following out a line of scientific investigation which, when understood, appeals so strongly to its intelligence that it unhesitatingly asserts that "homœopathy should be taught in all medical colleges as a branch of historical medicine."

The principles of law probably existed in a disjointed and fragmentary form in the earlier ages of the world, but it remained for the Romans to crystallize into a living code those great principles which form to-day, and will through all time, not only the foundation, but the life, of the jurisprudence of the civilized nations of the world. The formulating of Roman law is a part of ancient history, but as we study it we study the progress of civilization in its higher forms, past and present, as it crushes beneath its feet the reign of brute force, the offspring of passion and ignorance, and moves grandly on to the conquest of the world. There was no scientific therapeutics, nothing as a foundation upon which to build, nothing as a guide to intelligent investigation, until Hahnemann formulated in a clear and distinct manner that great principle at which Hippocrates had hinted, and which in Hahnemann's hands, and those who followed, became a living and active force, the foundation and life of the scientific therapeutics of the world. And as the history of Roman law is the history of the jurisprudence of all the most civilized and enlightened nations of the earth, so the history of homœopathy is the history of scientific therapeutics throughout the world. The *Medical Record* shows the drift of public sentiment, and its own foresight, when it urges that the "history of homœopathy shall become part of the teachings of all medical colleges," for all that is necessary to have those principles take the position they merit in all medical teaching and practice is to have them presented as the true historian would present them, in their naked strength. We have long believed that, in the not distant future, the history of homœopathy would form a part of the curriculum in all medical colleges which could lay claim to scientific impartial medical teachings, and we are glad to see one of the

leading and most ably-conducted journals of the old school assert, in such positive terms, that "in that direction matters are rapidly tending."

VACCINATION FOR RABIES.

IN the recent investigation of M. Pasteur he endeavors to show that we have a remedy in vaccination for rabies in dogs, almost if not quite as sure a preventive of that terrible disease as the vaccination in the human being for kine-pox is a preventive of small-pox. In an exceedingly interesting address delivered at the International Medical Congress at Copenhagen, August 11th, 1884, he sets forth his theory, and the facts by which, in his opinion, it is established. He claims to have proved that the virus of rabies always develops itself in the nervous system, in the brain, the spinal cord, the nerves and the salivary glands, and never simultaneously involves every part. It may, for example, fix itself in the spinal cord, and thus attack the brain; or one may find it in one or more parts of the brain, and not in others. "If," he says, "one kills an animal when the disease is at its height, it is often difficult to find the virus of rabies at any given point in the brain or spinal cord, but we have fortunately discovered that, in every case in which death occurs as a natural result of the development of the disease, the uppermost portion of the spinal cord, which forms the point of transition between the cord and brain, and which one calls the *bulb*, is invariably the seat of the poison. When an animal dies of rabies (and we know that the disease invariably ends in death), it is absolutely certain that one will be able to obtain from the animal's bulb rabies virus, which will produce the disease by inoculation on the surface of the brain in the arachnoid cavity, after previous trephining."

In M. Pasteur's numerous experiments, most of the vaccinations were made on the arachnoid in dogs, rabbits, Guinea pigs and monkeys, after trephining. It was found the virus increased in intensity when passed from one of the above animals to the other, excepting in the monkey, but after being passed from one monkey to another, and then to the rabbit, the incubation period gradually increases. Believing, after these experiments, he had obtained a virus so modified that it could be used in comparative safety, and remembering the opposition shown in the scientific world to Jenner's discovery, he secured from the Under Minister of Instruction the appointment of a scientific commission composed of MM. Beclard, Paul Bert, Bouley, Tesserand, Villemin and Valpin, to inquire into the facts. The results of the commission is thus given by M. Pasteur:

"I presented to the commission nineteen vaccinated dogs, all of which had been rendered insusceptible by preventive inoculation, and thirteen of which after vaccination had been proved by inoculation by trephining. These nineteen dogs were compared in different ways with nineteen dogs chosen from others for the purpose of the experiments. In the first place, on the 1st of June, two of the protected dogs and two of the trial dogs were inoculated by trephining under the dura mater with the bulb from a mad street dog. On the 3d of June, one protected dog and one trial dog were bitten by a mad street dog. On the 4th of June, the commission made the same mad dog bite another protected and another trial dog. On the 6th of June, the mad dog which had been used on the 3d and 4th of June died, and with its bulb three protected dogs and three trial dogs were inoculated by trephining. On the 10th of June, the commission had one protected dog and one trial dog bitten by a fresh mad dog from the streets. On the 16th of June, the commission had two fresh dogs, one protected and one trial dog, bitten by one of the trial dogs of the 1st of June, which had gone mad on the 14th as a result of the trephining performed on the 1st of June. On the 19th of June, the commission had three protected and three trial dogs inoculated in one of the popliteal veins with the bulb of a mad street dog. On the 20th of June, the commission also had ten dogs, viz., six protected and four trial dogs, chosen from several others, inoculated in a vein. On the 28th of June, it having been brought to the knowledge of the commission that a veterinary surgeon, M. Paul Simon, had a mad dog in his hospital, four dogs were brought to it—viz., two protected and two trial dogs, in order that it might bite them.

The commission on rabies has thus performed experiments on thirty-eight dogs, nineteen of which had been supplied by me as insusceptible to rabies, while the other nineteen could be made mad. Those of the dogs which have not died as a result of the experiments are under observation, and will be kept under it for a long time. As to the present condition of the dogs which have been the subject of inquiry, the commission report that, in the case of the nineteen trial dogs, of six which were bitten, rabies occurred in three, of seven which were inoculated in a vein it occurred in five, and of five which were inoculated by trephining it occurred in all, while *not a single sign of rabies has shown itself in any of the nineteen vaccinated dogs.*

"During the course of the inquiry one of the protected dogs died, on the 13th of July, from a sanguineous diarrhœa, which first declared itself in the early days of that month. In order to determine whether rabies had any share in its death, three rabbits and one Guinea pig were at once inoculated with its bulb by trephining. All of these four animals are still in the best of health, which is a certain proof that the dog did not die of rabies, but of a common disease."

M. Pasteur, in the Copenhagen Congress, was the recipient of the most marked and flattering attention, and whatever practical value his investigations may have, they are manifestly in the right direction, and he deserves the commendation of the scientific world for the zeal and intelligence with which they have been conducted.

EXPERT TESTIMONY.

The Rhinelander case, in which a young man connected with one of the oldest and most wealthy families in the city was recently brought before a commission to decide upon his sanity, the decision involving the question of his being tried for attempt to murder, or being sent to the asylum as insane, has brought out in strong relief the utter uselessness of expert medical testimony as now conducted. One medical expert is pitted against another, and opinions presented coinciding to a certain extent with the wishes of the contending parties, entirely at variance with each other. We have no opinion to present as it regards the sanity of Rhinelander, but we protest in the strongest and most emphatic manner upon the management of the case, as being illogical, unscientific, and calculated to pervert the ends of justice. And yet the management of this case is only a fair specimen of all similar cases brought before the courts, in which a man is sent to the gallows, the State prison, or shut up within the walls of an insane asylum, upon expert testimony in which the judgment is so often warped and clouded by self-interest that the conclusions reached by the witnesses are entirely unlike. There is a growing feeling of distrust in the minds of the community against the present manner of employing experts in cases involving life and liberty, with a conviction that justice is not always reached. The expert should be an officer of the Court, paid by the State, appointed by the Governor, and selected for his intimate knowledge of the questions to be brought before him. His testimony would go upon record for future reference, and involve to a certain extent his reputation as a scientist. The question would be studied in all its bearings, with ample opportunity for investigation, from the standpoint of science, and solely in the interest of justice. Opinions prepared in this way would be of real value, and would do much to aid judge and jury to form a correct conclusion. Let us have a board of experts, officers of the Court, paid by the State, and do away with a procedure which often defeats the ends of justice, and is a disgrace to our civilization.

A NEW DISEASE.

Our British colleagues announce what they claim to be a new disease, which manifests itself by excavating ulcers, with an irregular caseous-looking base, a semi-gelatinous centre, and affects the region of the chest, neck and jaw.

The Pathological Society sets it down as a new infectious disease, to be known as actino-mycosis, that its origin was with cattle, and formerly known as maxillary sarcoma.

Prof. Ponfick, of Breslau, was first to describe the disease in man as identical with that found in cattle, in his monograph entitled "Human Actino-mycosis." It is said that the growths are distinctly pedunculated, and are fungoid in character.

THE COMMA BACILLUS.

The attention of the scientific world has recently been called to the claimed discoveries of Dr. Koch, of the cholera germs in the *comma bacillus*, so called from its resemblance to a comma. This bacillus, Dr. Koch says, is always found in the lower intestines of cholera patients, and not in any other disease or in any other organ or secretion of the body. Dr. Koch may be right in his theory, but he has by no means advanced as yet sufficient proof to warrant its unreserved acceptance. Other physicians claim that they get the *comma bacillus* where cholera is not even suspected. Dr. Klein, a prominent London physician, says that he has found micro-organisms in diarrhœa, so closely resembling comma bacillus as to be undistinguishable from them; and Dr. Gregg, on another page of this journal, hints that much more importance is given to bacilli, bacteria and micrococci than they deserve.

We should naturally suppose if we could capture the cholera germs, we could induce cholera in the lower animals by inoculating them with the infectious material. But this experiment thus far has proved an entire failure, the disease never having been communicated by inoculation, notwithstanding the effort has been repeatedly made. Dr. Koch claims that his germ requires moisture to live, and if clothes or any material which is supposed to contain it is thoroughly dried, it is completely killed, never to be resurrected again. He does not believe it can be carried in the air, but is transmitted to distant places by persons suffering with the disease, or by soiled clothing which have not been sufficiently dried to destroy the germs, and thinks that impure drinking water is one of the most fruitful channels of transmitting the disease. The latter statement is undoubtedly true, and during

the prevalence of this disease, or in fact any other summer disease, the utmost care should be taken in having the drinking water free from all impurities. Whatever may be thought of the theory of Dr. Koch, he deserves great credit for his careful investigations. Possibly Dr. Koch has already captured the germ of this fearful pestilence, but if not he has opened the way to a line of investigation which we have no doubt will yet yield great results.

THE REVISED MATERIA MEDICA.

THE editors of this much-needed work are now hard at work upon the first part, and hope to finish it in a few weeks. They call upon the profession everywhere for facts which have come under their own observation in reference to the proving and action of drugs. Theories are not needed, but simply facts; not at second-hand, but which have come under the personal observation of the writer. Such facts will be gladly received by Dr. Dake, Nashville, Tenn., the American editor. We await with more than ordinary interest the appearance of the first volume of the Materia Medica.

GOV. CLEVELAND'S DISCRIMINATION.

GOV. CLEVELAND'S discrimination against the Middletown Asylum in the use of the veto power is thus portrayed by a correspondent of the *Mail and Express*:

"Being particularly interested in the State insane asylums, I have been led to scrutinize with some care the action of a Governor in the matter of appropriations called for by the different institutions—who has been so highly extolled by his friends for his justice, integrity and unswerving devotion to the best interests of the people. The asylums are owned by the State, and the cost of erection and improvements, with the salaries of the officers, are defrayed by legislative appropriation. The support of the inmates comes from cities, counties or individuals by whom they are committed, the price from cities and counties being from four to five dollars a week, in most cases less than the actual cost of keeping them. Let us see the treatment these great State institutions receive at the hands of its Governor. The Hudson River State Hospital (old school) cost $1,290,000, and has a capacity for 350 patients. Buffalo State Asylum (old school) cost $1,242,900, and has a capacity of 340 patients. Middletown Asylum (new school) cost $607,000, and has a capacity for 400 patients. The report of the State Board of Charities shows that during 1883 the old school asylums cured but 11.6 per cent. of cases admitted, while the Middletown (new school) Asylum cured 16.83 per cent., losing only 4.39 per cent. of cases treated by death, while the death rate of the former was 6.49 per cent. Here are three institutions applying to the State for means to carry out what the trustees believe important and necessary improvements. The statistics given above show the economy practiced in the original outlay of buildings and grounds and the success of treatment.

"The Legislature, after a careful examination of the facts, grant the appropriations. Let us see how they are disposed of by our Governor, who in his vetoes protects the people, holding the scales of justice so evenly balanced that the rights of all are sacred. Last year the Middletown Asylum (new school) asked for $1,000 for a gymnasium and workshops for the patients. The appropriation was granted by the Legislature, but vetoed by Gov. Cleveland. This year the Hudson River Asylum (old school) asked for $1,250 for a 'Patients' occupation fund,' and the Governor did not interpose his veto. Last year the Middletown Asylum (new school) asked for $4,000 to furnish its new wards, without which the wards needed for the patients would be useless. Gov. Cleveland vetoed the appropriation. This year Buffalo Asylum (old school) asked for $3,000 for new furniture and carpets and for papering and painting, and the Governor approved. This year the Middletown Asylum asked for $6,000 for the protective fencing of exercise grounds for the patients, and the Governor vetoed the appropriation. At the same time the Buffalo Asylum (old school) asked for $6,500 for fencing the front of the asylum in Forest avenue. This was deemed of so much more importance than exercise grounds that the Governor immediately approved the appropriation. Of the seven State asylums, the Middletown, with a record superior to any of the rest, showing more economy in the original outlay, and more success in treatment, is the only one which received no appropriation."

These statements certainly justify us in suspecting that the Governor is acting under sectarian prejudice, or else he is influenced by advisers who make him appear as unjust to a large body of his constituents.

The excuse that the vetoes were based on the advice of an old school committee of the State Board of Charities shows, at least, a carelessness and a lack of justice on the part of the Governor highly reprehensible.

BIBLIOGRAPHICAL.

MALARIA AND MALARIAL DISEASES. By George M. Sternberg, M.D., Surgeon U. S. Army. New York: Wm. Wood & Co. 1884.

The July volume of Wood's Library of Standard Medical Authors treats of a subject which enters largely into the practice of every physician, and is of more than usual interest. In the introduction the author passes in review certain forms of disease which he thinks are improperly ascribed to malaria, and then proceeds to inquire more particulary as regards the nature and effect of a morbific agent, which he defines as an unknown poison of *telluric* origin, the cause of periodic fevers. The position taken by many in denying the existence of such an entity as malaria, and who account for the disorders commonly ascribed to the action of this poison, by the supposition that they are due to immaterial causes, such as refrigeration, electricity, etc., he thinks untenable, and that the general belief in a material agent as the cause of these phenomena has a substantial foundation. The work is divided into two parts; in the first the author discusses with a wide knowledge of the literature of the subject, and excellent judgment, 1st, the mode of infection or intoxication; 2d, conditions governing the evolution and dissemination of malaria; 3d, speculations and researches relating to the nature of malaria; 4th, general effect

of malaria ; 5th, antidotes to malarial poisoning ; 6th, prophylaxis ; 7th, geographical distribution. Part Second includes a discussion of malarial intermittent fever, continued malarial fever, and hemorrhagic malarial fever. The volume embodies the research and practical experience of a careful thinker, presented in a clear and readable form, and is one of the best of the very excellent series of works with which the enterprising publishers are enriching our libraries.

American Medicinal Plants. An Illustrated and Descriptive Guide to the "American Plants" used as Homœopathic remedies. Their History, Preparation, Chemistry and Physiological Effects. By Charles F. Millspaugh, M.D. Illustrated by drawings of each plant by the author. Boericke & Tafel, Publishers.

The work will contain 180 colored illustrations with complete text of all the proven plants, indigenous and naturalized, in the United States. The preface, a glossary of botanical terms and complete index, together with a carefully arranged bibliography, will be given with the last part. The author has in every case drawn and colored the plants from specimens as they stood in the soil. From the specimens submitted to us we can say that the author, who is the artist also, and the publishers, have combined to give us a work of rare beauty and usefulness.

Diphteritis und deren erfolgreiche Behandlung nach langjährig bewährter Heilmethode nebst statistischen Beobachtungen von Dr. V. Friedrich. Leipzig und Neuwied, 1884.

In a pamphlet of 34 pages the author gives the result of his treatment of diphtheria, and his own peculiar views of its pathology. He contends that diphtheria always begins with symptoms of disordered digestion, that an emetic brings up sour and rancid ingesta, with marked improvement of all the symptoms ; that relapses occur through errors of diet, and improve after clearing out the stomach and bowels, and that the treatment must be directed primarily against the initial gastric symptoms. As an emetic he uses the following formula : For adults—tartar emetic, 0.2, pulv. rad. ipec., 2, m. f. pulv. div. in part. 3 æq. D. S. A. powder every fifteen minutes. For children from 6 to 14 years, half the above dose ; for children under six years, the following : Infus. rad. ipec. (1) 30, tart. stib. 0.1 (syr. rub. id. 10-15) m. D. S. A. teaspoonful every fifteen minutes. To open the bowels he uses an enema, the Karlsbad water, the Bitter water, or castor oil.

He uses internally the chlorate of potash in a solution of 4-120 grammes, giving half a tablespoonful every two hours, in an equal quantity of hot water. A solution of nitrate of silver (one part to 10 or 15 parts of water) locally applied to the throat with a brush, followed by gargles of lime-water when possible. If the mucous membrane is abraded he uses gargles or injections of a one per cent. solution of carbolic acid, mixed with two or three parts of thyme tea, to prevent blood-poisoning. With obstinate children, when these measures fail, he uses douches of lime-water diluted with 1-3 parts of warm water in an atomizer through the mouth or nose, preferably the latter. In diphtheria of the nose he washes the nose and pharynx with lime-water and weak carbolic acid solutions in an atomizer, along with steam inhalations Epistaxis is controlled with chloride of iron undiluted, in the form of tampons, or diluted as injections. Glandular enlargements are treated with flaxseed poultices.

The great prostration is treated with strong wine, cognac, and quinine, with ether internally and externally, ice-cold douches, subcutaneous injections of camphor, or enemas of wine, ether and camphor. In desperate cases he recommends the hot bath, with packing in blankets, or cold douches in warm baths.

In laryngeal diphtheria he employs the emetic treatment, with frequent inhalations of steam containing lime-water, or, in certain cases, carbolic acid solution, poultices externally, with stimulating and nutritious diet. When tracheotomy is indicated he urges its early performance, with constant steam inhalations, till all deposits and secretions cease. He gives the following results of his treatment :

In 1877 and 1878 he treated 141 cases, with 20 deaths ; in 1879 to 1882, 137 cases, with six deaths ; 40 cases in families of the first class, with but one death ; 120 cases in families of the second class, with five deaths ; and 130 cases in families of the lower class, with 20 deaths. In the first year of life, nine cases treated, with four deaths ; in 128 cases from one to six years, 18 deaths ; in 101 school children from 6 to 14 years, no deaths. From the stand-point of sex, in 168 females, eight deaths ; and in 122 males, 18 deaths.

We cannot agree with our author's statement, that diphtheria never begins with a cough, hoarseness, difficult breathing, or that any catarrhs present are due to the syrups or other sweets so often employed by physicians. We fail to see that the author has proved the soundness of his pathology in regarding the stomach as the starting point of the disease, or the great efficacy of his emetic treatment. While a disordered stomach often accompanies diphtheria, we have failed to recognize in it the starting-point of the disease. It is the same old story of hanging on to a notion or hobby, and running it into the ground. Recent experience and research condemns the emetic treatment ; certainly would never advise its constant use. His other treatment coincides better with the general practice of the day ; but his omission of mercury in one form or another shows that he is behind the times.

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease. By I. Mitchell Bence, M. D. Philadelphia : Henry C. Lea's Son & Co. 1884.

This volume forms one of the excellent series of manuals for students of medicine, now being published by H. C. Lea's Son & Co. It is divided into three parts : 1. The Inorganic Materia Medica ; 2. The Organic Materia Medica ; 3. General Therapeutics, closing with an appendix in which are given substances which act upon the pupil, and those which act upon the generative organs. The work contains an immense amount of information admirably arranged and so suggestive that the line of thought can easily be carried out in larger works. With our key of the dual action of drugs we get excellent hints of therapeutic indications.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M. D., London. Fifth American, from the sixth enlarged and revised English edition. With 150 engravings. Philadelphia : Henry C. Lea's Son & Co., 1884.

This is one of the best text-books for students we have seen. It is elementary in its character, presenting its facts in a clear form, but condensed in such a way as to be easily remembered. The chapters on vegetable parasites, septicæmia and pyæmia, tumors, and the etiology of disease, are all that could be desired, while the chapter on tuberculosis would have been improved by a more careful study of recent investigations.

The *North American Review*. The October number of this valuable serial contains, with other interesting and timely papers, one on "The Origin of Yellow Fever," by Dr. C. Creigh-

ton, in which he attempts to show that "the poison of yellow fever comes in the last resort from the discharge of the sick negro; it is generated by the fermentation or putrefaction of the dysenteric and other filth of slave-ships." * * * As the noxious miasmata that give rise to yellow fever have come from the negro body, they cannot poison the negro again, hence the immunity of this race from its ravages.

Havana is said to be one of its endemic centres, and it may take long to remove the last traces of slave-ships from the mud of its bay. The article shows the result of much research and must be read to be appreciated.

The Century Magazine. The October issue closes the twenty-eighth volume of this excellent magazine, and it is announced that the work of the coming year will include a series of illustrated articles on "Battles and Leaders of the Civil War," to be contributed by able writers on both sides of the conflict. "Is Arctic Exploration Worth its Cost?" is an excellent review of the various efforts to explore the Arctic circle.

THE ALCOHOL QUESTION IN THE AMERICAN INSTITUTE OF HOMŒOPATHY.

REPORT OF THE BUREAU OF CLINICAL MEDICINE, J. W. DOWLING, M. D., CHAIRMAN.

The subject selected for the consideration of the bureau was "The Indiscretions of Life, and their Relation to Disease," as follows: The effects of the abuse of alcohol on the nervous system, Dr. S. H. Talcott; on the liver and digestive tract, Dr. Wm. Owens; on the kidneys, Dr. J. S. Mitchell; on the circulatory and respiratory organs, Dr. J. W. Dowling; the effects of the abuse of tobacco, Dr. T. F. Allen; of drugs, Dr. A. S. Couch; physical strain, etc., Dr. I. T. Talbot; mental strain, Dr. F. H. Orme. The papers confined the discussion of the alcohol subject chiefly to the pathological effects.

Dr. Dowling in his paper said, on account of the great variation in susceptibility of different individuals to the influence of alcohol, and of the susceptibility of the various organs in the same individual at different times, it was next to impossible to give an intelligible idea of what constituted "abuse," but in this connection he unhesitatingly defined abuse as *habitual use*.

In reference to its action upon the circulatory organs, the effect was likened to that of nitrite of amyl, which is known to paralyze the vaso-motor nerves in all parts of the body, thereby relaxing and dilating the walls of the smaller arteries throughout the body. He says, according to Richardson:

"The heart, which has been kept in check by the tension of their walls, is relieved of a portion of its labor," and as a locomotive increases its speed rapidly on the breaking of the coupling which attaches it to the train behind, so the heart's action is increased in frequency. This fact in connection with the action of nitrite of amyl, has been taken advantage of by physicians throughout the civilized world to relieve the arterial spasm which causes the overloading and distending of the heart in that dreadful condition known as angina pectoris. The drug, like alcohol, *has its uses*, but it is nevertheless a poison. To a less extent alcohol acts in precisely the same way, paralyzing the vaso-motor nerves, dilating the arterioles, increasing the frequency of the heart's action.

"Richardson, in referring to this, says: 'If you attend a large dinner party, you will observe after the first few courses, when the wine is beginning to circulate, a progressive change in some of those about you who have taken wine. The face begins to get flushed, the eye to brighten, and the murmur of conversation becomes loud. What is the reason of that flushing of the countenance? It is the same as the flush from blushing, or from the reaction of cold, or from nitrite of amyl. It is the dilatation of vessels following upon the reduction of nervous control, which reduction has been induced by the alcohol. In a word, the stage of vascular excitement from alcohol has been established.'

"As was before stated, if the indiscretion stop here, provided the subject be a healthy one, the paralyzing effect of the alcohol soon passes away. The walls of the vessels regain their tone, the vessels resume their former calibre, the old obstacle is offered to the too free emptying of the heart, and the undue frequency of action disappears; but if the indiscretion be soon repeated again and again, by and by a condition of *permanent* vaso-motor paralysis is established. The vessels become permanently dilated, the heart's action permanently increased in frequency.

"If this was the only effect of alcohol, it is easy to prove that from this, and this alone, serious injury, permanent injury, injury calculated to shorten life, would result to the circulatory and respiratory organs. But its action does not stop here. The poison generated by the combustion of alcohol in the system produces cellular changes everywhere; by its contact with the blood disks, changes are produced in them; by its mixture with the serum of the blood, changes, injurious changes, are produced here; the character of the blood is changed, the heart, the arterial walls, the elastic lung tissue, the muscular fibre of the bronchial tubes, the mucous membrane lining them and the upper air passages, the muscles concerned in respiration, all receive impure, poisoned blood, and are damaged accordingly, with a result which can be foreshadowed."

The doctor then enumerates the diseases of the circulatory and respiratory organs, resulting from the abuse of alcohol, and explains how the pathological changes are brought about.

CORRESPONDENCE.

THE SCIENCE OF THE BACTERISTS.

MESSRS. EDITORS:—Bacterists lay great stress upon the scientific accuracy of their investigations in their special field. But let us investigate them, as well as their science, a few minutes. I defy one and all of them to point out the slightest clear and unmistakable difference between their assumed bacilli and rods of fibrin of the same lengths; or between their so-called spiral bacteria and spirals of fibrin of the same lengths; or between what they call micrococci, and the granules of fibrin. These three forms of their claimed bacteria are far more numerous and common, almost infinitely so, than any of their other species; and yet, I repeat, that I defy them to point out the slightest distinction between them and the similar forms of fibrin. Indeed, with all their pretensions to knowledge, they seem to know nothing whatever about any similar forms of fibrin; have never told us, or even hinted at the possible existence, of such forms; much less have they ever warned us to be careful in our investigations to distinguish between the two. And yet there *never* was an instance of decay of organic matter, whether animal or vegetable, wherein rods, spirals and granules of fibrin, previously existing organized in such matter, did not appear under the rotting process, or as broken up by it, in hundreds, thousands, and even millions, if the decaying mass was of appreciable size—all of which thousands and millions of these fibrin forms are of precisely the same color, size, form, demeanor, and motion if in water, of the similar forms of pretended bacteria.

All vegetable matter possesses fibrin like animal matter, only not in such abundance; and in either case the fibrin exists almost wholly in threads, which, under rotting, break up into shorter and shorter pieces, as the rotting proceeds—straight threads into rods, or the wonderful bacilli, spiral threads into spirilli, and finally one and all, under full rotting, into the granules that compose them, or the terrible micrococci. And all this is exactly repeated within the living body under the rotting processes of disease; that is, under suppuration, ulceration, etc. But what have the bacterists, with all their assumption of superior knowledge and scientific accuracy, said or known about all this? Absolutely nothing. If they had known of it they would certainly have told us, for it is too important a subject to be passed over in silence. What must we say, then, of their pretensions to such great accuracy in their investigations, and their scientific attainments in this field; and especially what shall we say of their denunciations of one and all who may find and present evidence that militates against their theory—while they themselves show such an utter want of all true knowledge which is of any value upon the subject?

But what of their "cultivation" of bacteria? Does not this fact settle the matter in their favor? I am frequently asked. By no means. Their lack of knowledge is more conspicuously shown, and is more lamentable here, than in almost any other department of their labors. Why, look at the facts as they really are. They take animal broths, or vegetable infusions, in which they seem not to have the slightest knowledge of the presence of fibrin, set those broths or infusions aside to rot, with some of their assumed germinating material in them, when the fibrin threads previously existing in the broth or infusion are broken up by the rotting; and then, wonderful to tell, they have "cultivated" their bacteria! The exact facts, however, are that they have been looking at rods, spirals and granules from broken threads of fibrin all these years, in their thousands of investigations, and *did not know it*. They have thought they were looking at *vegetable parasites*, and have built a pretended science upon their delusion. What kind of science is this? This is plain talk, I know, but under the abuse they have heaped upon others who have dared to take a different view, is it not warranted? It is getting to be high time that they abandoned their favorite amusement, of assuming to know it all and that nobody else knows anything about it, and gave their time to learning something of the real science of this question.

ROLLIN R. GREGG, M. D.

BUFFALO, N. Y., Sept. 4, 1884.

THE HAHNEMANN HOSPITAL OF NEW YORK.

THE year just closed has been the most active, successful and prosperous year of work in the history of the institution. The Board of Trustees and the Board of Ladies have been actively engaged in forwarding the interests of the hospital in the highest degree.

The physicians and surgeons have expressed and shown renewed interest and attention, which has imparted stimulus to every department. Since the erection of the building now occupied by the hospital in 1878 there have been registered 1,124 patients.

There were 515 medical cases and 609 surgical. The number of patients treated during the year ending April 1st, 1884, was 317; males 100, females 217. Of this number 214 were full-paying cases, 53 part pay, and 50 charity. There were 186 patients discharged cured, 75 improved, 11 unimproved, and 11 deaths. There were 152 medical cases and 165 surgical. Upon the 165 surgical cases there were performed 119 surgical operations, with only 3 deaths.

The average number of patients in the institution has been 26, the maximum number being 49 and the minimum 19.

That the institution never was as prosperous is shown by the several innovations in the completement of the hospital facilities and in the increase of 82 patients treated over the years 1882–83, and an increase of 100 over the years 1881–82. The effort of the year has accomplished the establishment of a fully equipped operating room with northern and western light and supplied with several hundred dollars worth of new instruments, also an examining room for general examinations as well as of the special departments of gynecology and laryngoscopy.

A complete set of record books, original in their construction, have been supplied, one new ward opened and the medical department made almost self-supporting. There is a well-organized band of six qualified nurses in attendance on patients, and it can be assured that the nursing is far better than at any former time in the history of the institution. The internal workings run smoothly. The institution was never better and more favorably known than at the present time.

JAMES W. WARD, M.D.,
Resident Surgeon.

THE CLIMATE OF ASHEVILLE, N. C.

PHYSICIANS having patients with pulmonary diseases, and whom they wish to send to a milder climate, would do well to investigate the merits of this as a climate for consumptives.

Having an altitude of 2,250 feet above tide-water; a dry air; a mean summer temperature similar to that of St. Paul, Minn., and a mean winter temperature milder than that of Geneva, Turin, or Milan, in Europe, and scenery unsurpassed in beauty—Asheville is the most desirable spot east of the Rocky Mountains.

For the past fifteen years the writer has known of patients coming to this place for the relief of pulmonary troubles, and he has yet to learn of a case which did not improve or completely recover.

One of the great advantages possessed by this place is its accessibility; the trip from Northern cities consuming much less time than a journey to Florida, Texas, Colorado, or California; and the expense is less, as a matter of course.

Any physician desiring further information regarding this place will receive it by addressing, at this place,

EDWIN A. GATCHELL, M.D.

SOCIETY REPORTS.

THE HOMŒOPATHIC MEDICAL SOCIETY OF PENNSYLVANIA.

THIS Society held its twentieth annual meeting in Pittsburgh, on September 16th. The meeting was called to order by the President, Dr. Wm. R. Childs, of Pittsburgh. An address of welcome was delivered by C. F. Bingaman, M.D., which was responded to by Prof. E. A. Farrington, M.D., of Philadelphia. After the usual routine business of reports of officers and standing committees, the Society proceeded to the consideration of the various scientific papers presented by the different bureaus. This Society has earned a well-deserved reputation in the past for the excellent papers which are presented by its members, and the present meeting only added still more to its reputation. The papers were listened to with interest and freely discussed, the latter bringing out many practical points which will prove of value to the profession at large.

One very pleasant feature of the meeting was the extension and acceptance of an invitation from the trustees and officers of the West Penn Hospital (old school) to visit that institution. The Society were received by the officials, and after inspecting the wards, were ushered into the dining room, where a handsome collation was spread for cheering the inner man. After the exchange of compliments the Society returned to the city, each one who participated in the enjoyments feeling that "another link had been forged in the chain of human progress." In commenting on this event the Pittsburgh *Dispatch* says, editorially, "It is hardly probable that the professional rules which forbid consultations between members of the opposing schools are yet nullified, but the meeting of physicians of both classes under such favorable auspices as those of yesterday has a very liberal tendency. Pittsburgh may be proud that the first indication of laying aside medical exclusiveness is located at one of her public institutions."

The following officers were elected:

President—J. E. James, M.D., Philadelphia.
First Vice-President—D. Cowley, M.D., Pittsburgh.
Second Vice-President—J. K. Lee, M.D., Johnstown.
Corresponding Secretary—R. E. Caruthers, M.D., Allegheny.
Recording Secretary—C. Bartlett, M.D., Philadelphia.
Treasurer—J. F. Cooper, M.D., Allegheny.
Necrologist—W. R. Childs, M.D., Pittsburgh.

BUREAU APPOINTMENTS.

Ophthalmology and Otology—H. F. Ivins, M.D., Philadelphia.
Gynæcology—C. H. Hofmann, M.D., Pittsburgh.
Pathology—W. C. Goodno, M.D., Philadelphia.
Surgery—C. M. Thomas, M.D., Philadelphia.
Pædology—C. S. Middleton, M.D., Philadelphia.
Materia Medica—E. Fornias, M.D,, Philadelphia.
Obstetrics—J. C. Guernsey, M.D., Philadelphia.
Clinical Medicine—C. C. Rinehart, M.D., Pittsburgh.
Sanitary Science—E. C. Parsons, M.D., Meadville.

The Society adjourned to meet in Philadelphia in September, 1885.—(T.M.S.)

TRANSLATIONS, GLEANINGS, ETC.

THE PRESERVATION OF ANIMAL VACCINE VIRUS IN A LIQUID FORM.

THE present methods of preparing and preserving animal vaccine lymph for medical purposes, is not quite the desideratum of our profession. One reason is, that there is often found but very little virus adhering to the quills or points. Then again, the manner in which the lymph has to be dissolved is not quite satisfactory. There doubtless are many methods of moistening the lymph on the quill or point, and a little practice enables a physician to make the proper and intended use of the virus; still, these various procedures have too many drawbacks. Besides, the lymph does not keep that way any length of time, and there is too much waste of material going on. Fluid lymph is also kept in capillary tubes; but, as here the virus is but the fluid contained in the ripened pustules, the greater quantity of matter contained in the scab is thus lost, not to mention at all the waste caused by material adhering to the walls of the narrow vessel. It is clear, therefore, that any method promising to be an improvement on the old must be gladly welcomed.

Dr. Chalybaus, in charge of the Vaccine Institution of Dresden, had met with such remarkable success that he was requested to publish his method of preserving vaccine virus, and he has done so in a recent number of the *Korresp. Blatt. of Saxonia* (6, '84). He proceeds as follows:

First, he selects animals which, after examination by the veterinary surgeon appointed for this purpose by the government, have been pronounced perfectly healthy, and which come from well-known uninfected stables. Moreover, during the whole period of vaccination the animals are twice daily subjected to a critical examination by the same competent authority. The lymph having been obtained from them, the animals are sent to the public abattoir of Dresden, and there slaughtered. Not until the post-mortem examination has given undoubted proof of the healthy condition of these animals, is the lymph made use of for the purposes of vaccination. This procedure insures, *a priori*, healthy virus.

The manner of obtaining the vaccine lymph is as follows: With peculiarly constructed pinchers the whole pustule, when ripe, is squeezed off, and scrapedo ff the pinchers into a mortar made of agate, where it is triturated into a homogeneous mass. To about two or three pustules one drop of glycerine—which has been made aseptic by a minute quantity of thymol—is then added, when the lymph thus obtained represents a yellowish, opaque, glue-like, viscid fluid. As little glycerine as possible is employed, but some has to be added, as the lymph otherwise would adhere to the glass tubes in which it is preserved. Small capillary tubes have been found not to answer the purpose, as there is too much waste connected with this method. Common and rather thick glass tubes are used; they must be large enough to contain a quantity of virus sufficient for ten to twenty vaccinations.

When thus prepared, the glass tubes are placed in a refrigerator for one week. They will then keep for a long time in almost any temperature. The success achieved with this fluid lymph has been remarkable, and with lymph prepared and preserved in the manner described, and kept in a common closet for a period of thirty-four weeks, exactly the same excellent results have been obtained; a proof that the virus does not lose its power by time. No former method allowed the keeping of vaccine virus for a longer period than, at most, three weeks; but Chalybaus' procedure permits preservation for at least nine months, and it is probable that further observations will demonstrate the fact that virus thus prepared can be kept in good condition in any climate and at any temperature for an unlimited time.—*Med. and Surg. Reporter*, July 19, 1884.

HÆMATURIA.

BY PROF. R. ULTZMANN, OF VIENNA.

Translated by W. Storm White, M.D.

PART II.

HEMORRHAGE from the bladder, as well as from the kidney and pelvis of the kidney, is distinguished from that of the urethra by the fact that the urine is voided bloody, and that the second half cannot be distinguished from the first in regard to its containing blood. Hemorrhage from these situations may sometimes present the characteristics of parenchymatous bleeding, sometimes those of rupture of the larger blood vessels, and occasionally hemoglobinuria. Unfortunately, we are not always able to specify whether we have to deal with a hemorrhage from the kidney or from the bladder, even after the most thorough chemical and microscopical examination of the urine. The recognition of these hemorrhages is of the greatest importance to the practicing and practical physician. Therefore, in the following, all those points will be more closely considered which bear upon the differential diagnosis between bleeding from the bladder, from the pelvis of the kidney, and from the kidney itself.

(*a*) In the same manner as it was formerly thought possible to diagnose a kidney trouble and one of the bladder by means

of litmus paper, or between pyelitis and cystitis, so it was also believed possible to recognize kidney or bladder hemorrhage by the acid or alkaline reaction of the urine. Although these relations sometimes completely correspond, it is, unfortunately, not always the case, and they may be falsified, especially when the bleeding occurs complicated with a purulent catarrh of either the pelvis of the kidney or bladder. Therefore, the knowledge of the reaction is not sufficient, because in violent hemorrhage, as can occur by the rupture of larger vessels, the alkali of the blood's serum is able to completely overcome the acid of the urine, and then we will have an alkaline urine, although the hemorrhage did not come from the bladder. The urine may also become alkaline from the internal use of alkalies or alkaline mineral waters, or so large a production of pus may be present that the alkalinity of the serum of the pus may overcome the acidity of the urine. In such cases we also find alkaline urine with the hemorrhage which does not come from the bladder. Indeed, it is well to observe that in these cases the alkaline reaction does not proceed from fixed alkalies (carbonate of soda or carbonate of ammonium) which usually accompany diseases of the bladder.

On the other hand, a markedly acid urine is frequently observed with hemorrhage from the bladder. This usually occurs when the hemorrhage is parenchymatous, and there is at the same time no catarrh of the bladder with formation of pus. The reaction of the urine on litmus alone, therefore, cannot be applied to the recognition of the locality of the hemorrhage, according to the above citations.

The exhibition of carbonate of ammonia in the urine would be of much greater importance in this respect. If this is discernible in large quantity the probability is greater that we have to deal with a hemorrhage from the bladder. The urea, or at least a portion of it, had changed into the carbonate of ammonia by the fermentation of an abnormal secretion of the bladder, a condition which usually appears in diseases of that organ. On the same grounds, the appearance of large water-colored, coffin-lid crystals of triple phosphates is, therefore, of special importance in the diagnosis of hemorrhage from the bladder, because these crystals, as a combination of ammonium, indicate the presence of carbonate of ammonia in the urine with certainty. The carbonate of ammonia can sometimes be recognized by its peculiar stifling odor, but if one is in doubt he can make the following test: Pour 30 c.c. of the urine into a 100 c.c. matrass. Cork it up; run a hollow tube of glass the size of a quill through the cork, and insert a spirally-rolled strip of moistened (distilled water) litmus paper into its bore. Then warm the matrass, at the same time constantly shaking it with great care over the flame until the urine begins to boil. If carbonate of ammonia is present, it will be forced up through the glass rod with the steam and color the red litmus paper blue. A simpler (though less certain) test is as follows: If the blue-colored litmus paper becomes red on exposure to the air, the alkaline reaction was due to a volatile alkali (carb. am.); if, on the other hand, it remains blue after drying, it is one of fixed alkalies (carb. sodium). This test can evidently be used only when the alkalinity is marked

(*b*) Sometimes the color of the urine is as important as its reaction. The older practitioners have already associated the red-brown or coffee-colored nature of the urine with a hemorrhage of the kidney, and the bright red, with one from the bladder. These relations are right only under certain conditions. The red-brown, brown or black tint of the urine originates from the deoxydized hæmoglobin (methæmoglobin), and can only appear in such urines as have been retained, mixed with the blood, for a long time in the urinary apparatus. Such conditions are usually found in parenchymatous hemorrhages; gradually, drop by drop, the blood mixes with the urine, the blood corpuscles remain for a long time in contact with the warm fluid, the elements of the urine have ample time to work destructively upon them, until finally the red hæmoglobin is transformed into brown methæmoglobin. Corresponding to the above given relations, especially in parenchymatous hemorrhages, the urine will exhibit the red-brown or black-brown tints, even though it came from the bladder (cancer in the bladder).

The conditions are essentially different when we have violent hemorrhage, as by the bursting of the larger vessels (varices at the neck of the bladder). In such cases a large quantity of blood enters the urinary apparatus, usually the bladder, and suddenly dilates it. The unusually rapid dilatation also acts as a provocation to the immediate voiding of the bladder—an urging to micturition soon appears and the blood will be expelled before it has had time to be affected by the urine. As, however, hemorrhages from the bladder usually proceed from rupture, and those from the kidney, on the contrary, are usually parenchymatous, therefore the brown-red or brown-black coloration of the urine is to be considered diagnostic for the latter, and the blood-red for the former.

(*c*) The specific gravity of bloody urine can be turned to diagnostic use, inasmuch as hemorrhages from the pelvis of the kidney and kidney are not unfrequently coincident with such diseases of these parts (pyelitis, etc.) as have polyuria in their courses, which present a lessening of the sp. gr., while bleeding into the bladder with cystitis at the same time present (extremely rarely with polyuria), gives normal relations as far as the specific gravity is concerned.

(*d*) If blood coagula are present, we can sometimes determine the origin of the hemorrhages with certainty from their forms.

If they have the characteristics of freshly coagulated blood, if they are soft and colored dark blood-red, they are fresh and have not been bleached by the urine; if they are flesh-color or dirty yellow, they are of older origin and have been retained for a longer time in the urinary apparatus. Those short, bleached, dirty-yellow, rod-shaped coagula usually originate from the distended pelvis of the kidney (Simon) and appear in the urine for a long time after a previous violent hemorrhage from the kidney. Heller long since observed these decolored coagula in the urine, and regarded them as concretions originating from fibrous tissue.

With regard to the form of the coagula, it is assumed that those which are long and worm-shaped indicate a hemorrhage from the kidney, while the more rounded, irregular and torn ones come from the bladder. But it must be acknowledged that it is only the long staff or worm-shaped ones that give a certain indication of the location of the bleeding. If such coagula are found, one can say with certainty that the place of bleeding is above the ureters, or in other words, in the pelvis of the kidney or kidney itself, because the quill-thick coagula are but casts of the ureter. On the other hand, the irregular crumpled ones are not in the least characteristic. The situation can as well be in the kidney (pelvis) as in the bladder, and the blood can have run fluid into the bladder and there coagulated. Moreover, coagula are not constant in hæmaturia. They never appear in a parenchymatous hemorrhage, because the blood comes drop by drop and immediately mixes with a larger quantity of urine. They appear most frequently in violent hemorrhages in such places where the quantity of blood exceeds the quantity of urine, therefore in the pelvis of

the kidneys and ureters. In the bladder they can also appear when the bladder has been nearly emptied of its urine.

(*e*) The microscopic examination of the sediment is exceedingly important in renal hemorrhage. In parenchymatous bleeding from the kidney, we not unfrequently find beautiful cylinders consisting of blood corpuscles or fibrin and kidney epithelium, which are colored brown (hemorrhagic) by the blood-coloring matter. If the bleeding came from the larger vessels of the kidney (neoplasma), we generally find nothing characteristic of the kidney in the sediment. It will be claimed that single epithelial cells will be thrown off with the blood corpuscles, but it is only with the greatest difficulty that they can be found in the large quantity of blood. Even after the closest examination, we find nothing but blood corpuscles. The single cells cannot be found in the great mass of blood.

Bleeding from the bladder is often characterized by nothing microscopically. Sometimes, however, when catarrh of the bladder is at the same time present, we find an increase of bladder epithelium and crystals of triple phosphates.

Now that we have considered hemorrhages from the kidneys and bladder in general, we will proceed to the special forms of disease which have such hemorrhages in their course, and to the special cases where new indications can be obtained for the diagnosis. We will describe first the most important hemorrhages into the bladder, afterwards those in the kidneys, and lastly into the urinary tract as a whole.

II. *Hemorrhages into the bladder* are found in new formations (tumors), varices at the neck of the bladder (the so-called vesical hemorrhoids), calculus, parasites (*distoma hæmatobium*), and finally in tubercular, diphtheritic and croupous ulcerations of the organ.

1. Hemorrhages from new formations in the bladder. According to Thompson, we find the following new growths in the bladder :

(*a*) Simple polypus (fibrous), which usually extends into the interior of the bladder.

(*b*) Medullary sarcoma.

(*c*) Epithelial carcinoma.

(*d*) And follicular or vascular tumors.

(*a*) *Fibrous polypi* are rare, and still more rarely are they recognized and treated operatively. Billroth diagnosed and successfully removed such a short-pedunculated tumor from a boy. The diagnosis in such cases must be made with the sound, as neither the subjective symptoms of the patient nor the microscopical examination of the sediment of the urine give any characteristic appearances. They usually produce a catarrh of the bladder and only present hæmaturia when they ulcerate.

(*b*) *Medullary sarcoma* gives similar results, and only in the latter stages present a catarrh of the bladder with a dirty colored urine, which is dirty greenish brown and stinks like carrion. The reaction on litmus is strongly alkaline from carbonate of ammonia. Albumen and blood are in great quantity, and sometimes also sulphate of ammonia. It is from such urine that the silver catheter becomes blackened. Crystals usual to alkaline urine and much molecular detritus are found in the sediment, but otherwise there are no characteristic elements that can lead to the diagnosis. The cachexia of the patient, and the finding of a hardness or tumor, with the finger above the symphysis or in the rectum, corroborates the diagnosis, if the tumor be found in the region of the bladder. Painfulness and urging to micturition are not very great if the tumor is in the fundus of the bladder and not in the neighborhood of its neck. Sometimes the inguinal glands are strongly infiltrated.

(*c*) *Epithelial carcinoma* develops slowly and soon presents a purulent catarrh with hemorrhage. On microscopic examination of the sediment we find (besides blood and pus corpuscles and crystals) numerous small, peculiarly shaped epithelial cells which are often in such numbers that they outnumber the pus and blood corpuscles. The cells are round or oval, small and not unlike kidney epithelium. Yet they are sometime stellate, and present two or three arms. The nuclei are sometimes very large and refractile, and occasionally we find several in one cell. Sometimes ten or more of these cells hang together and thus form epithelial shreds.

Although we are not justified in making the diagnosis of epihthelioma from the presence of variously shaped epithelial cells in the sediment, yet their occurrence (especially if constant) is worthy of consideration.

The constant appearance of these cells, with catarrh and hemorrhage at the same time, would serve to strengthen the suspicion of neoplasma vesicæ. The symptoms of epithelial carcinoma of the bladder are those of catarrh with hemorrhage. As differentiating them from calculus, the hemorrhages also appear during absolute rest. As important factors in the diagnosis, we have the negative result on exploration with the sound, the detection of a hardness or tumor in the region of the bladder, the cachexia, the infiltration of the inguinal glands, together with the careful examination of the sediment of the urine. The urging to urinate and painfulness in the region of the bladder or inguinal glands are sometimes very slight and only occasionally present exacerbations. It is only when the new growth is in the region of the collum vesicæ that the pain becomes so severe as to call for the administration of morphine.

In one case, observed by myself, the pains were very slight, and the tumor was located in the fundus of the bladder, and could be felt above the pubes, larger than one's fist. The pains were slight, even after the tumor had broken through the abdominal walls above the symphysis and established a carcinomatous fistula, through which the urine squirted, on urination, as from a spring. The patient died of septicæmia after the inguinal glands of the right side had become so much infiltrated as to compress the blood vessels of the thigh to such a degree that the whole right lower extremity became a shapeless, swollen mass.

(*d*) *Follicular or vascular tumors* are always recognizable after a persistent examination of the urine, and are the most important of the new formations in the bladder. We can distinguish two forms of these tumors : *Papilloma* of the mucous membrane or a papillary growth, and true *papillary carcinoma* or *carcinoma villosum vesicæ*.

Both forms are accompanied by parenchymatous hemorrhage, and in the later stages both present a purulent catarrh with bleeding, and it is only in the first, *i.e.*, in the papilloma, after throwing off the necrotic tissue, that resolution occurs, while in true papillary carcinoma a cachexia gradually develops and the patient dies.

I know of two cases of papilloma vesicæ which were cured. The first was in an old man from Hungary, who had become very anæmic from former violent hemorrhages, and sought relief from his difficulties here in Vienna. In the first examination of the urine, I found small, red, flesh-like shreds in the bloody urine, and under the microscope could distinguish them as fresh, well-preserved papillæ. The papillary structure was so well marked that I was able to demonstrate it to the patient's son, Dr. L., in Vienna. After trying several internal remedies, I employed the cold water cure, and after completing it, the hemorrhages ceased, never to return again. The patient is entirely well, and carries on his former occu-

pation. The patient's son, Dr L., informs me that the hemorrhages have not returned for three years.

The second case was that of a music teacher, æt. 60, from Bohemia, who had complained of hæmaturia only two weeks. He was suffering from urging to urinate and retention of urine. I introduced the metallic catheter and drew off the bloody urine, and when I wished to withdraw the instrument I felt that it was held fast. On dragging it out by force, I saw a mucus-like shred, three c.m. long, hanging from the eye of the catheter. On microscopic examination, I found it to consist of the most beautiful papillary tissue. After this attack the patient never complained again of urging to urinate or hæmaturia. He died six months later in his home in Bohemia, it is said, of some disease of the stomach.

These two cases, in which papillary tissue could positively be found in the urine, indicate that sometimes papilloma of the bladder can be cured spontaneously.

The *Papillary carcinoma* consists of a mass, more or less soft, similar to a medullary substance, extending through the whole substance of the walls of the bladder, so that we are able to discover a thickening of the walls, or even a tumor, by rectal examination or through the abdominal walls. The true papillary tissue is developed on the surface of this tumor, and consists of hypertrophic capillary blood vessels and a thick epithelial layer. Papilloma, on the other hand, confines itself to the mucosa. No tumor, or thickening of the walls can be found. The papillary growths also consist of enlarged capillaries, but usually there is but a slight layer of epithelial cells. In point of fact, however, it is only seldom that such a differentiation can be made under the microscope, and therefore it is only rarely that we can give the differential diagnosis with certainty, because, firstly, well-preserved capillary tissue is seldom found in the urine, and secondly, the one form seems to go over into the other, so that in the commencement of the disease the capillary growths are covered by only a slight epithelial layer in both diseases, and it is only later that the resulting cachexia becomes developed in the carcinomatous lesion.

In spite of this, however, we may sometimes recognize plainly the above given differences in the papillary growths of the bladder and turn them to account. When we find a papillary tissue well preserved and perfect in its finest villi, and covered by only a scanty epithelial layer, in the sediment of hæmaturia, and the patient is young and strong, we can assume that we have to deal with a papillary growth in the bladder.

If, however, the tissue is less beautiful, macerated, and covered with a thick layer of epithelium, especially if we cannot see the widened vessels of the villus, and the patient is greatly emaciated and old in years, we may assume that we have to do with papillary carcinoma, even if no tumor can be discovered by rectal examination. The first and most important symptom in papillary tumors is the hemorrhage. However, some patients experience a peculiar sensation in the pubic region months previous, which become more marked in riding over rough pavements; yet this is by no means a constant phenomenon. Others have a feeling in the penis as if they were going to have a fresh gonorrhœa; still others, even very old men, have, to their astonishment, powerful erections, which sometimes develop into painful priapismus. Urging to micturition is sometimes present, but this is not painful. So these appearances vary from the time that a few drops of blood occur for the first time in the urethra after urinating, till later a strong hemorrhage takes place. In the beginning, the patients usually believe that they are troubled with calculus, and therefore submit willingly to an examination with the sound. Although we cannot exclude the presence of a stone without using the sound, still there are conditions presented by the hæmaturia of papillary growths which are not to be found in calculus. Sensitiveness of the urethra, especially in the glans penis, is present in both, but not so intense in calculus as in these tumors. It may become so severe that every pressure on the penis, even of the shirt or pantaloons, becomes unbearable. The patient constantly holds the penis in his hands to protect it, particularly when attempting any bodily movement.

A symptom nearly as constant, and seldom failing, is the sensitiveness of the pubic region. This is because the favorite seat of the vegetation is in the region of the neck of the bladder, prostate and trigonum Lientodii. Because of this, the patients cannot remain seated any length of time, but soon get up or seek a horizontal position. They sit worse on an upholstered chair than on a wood or cane-bottomed one, but they are most comfortable on a round, perforated hair-cushion, or on an air pillow of the same form, because the perinæum then lies high and sustains no pressure. The favorite position is a horizontal one on the side, with a cushion between the knees, so that the urethra may not be pressed. In calculus in the bladder, we never have such a high degree of sensitiveness in the sub-pubic region.

In calculus the stream is not unfrequently completely interrupted, because the stone lies before the inner opening of the urethra. In papillary carcinoma, this only occurs when a blood coagulum or necrotic papillary tissue stops it up. These are usually voided by strong straining, and the stream again flows freely. The pain in papillary cancer is usually most intense before urination, while in calculus it is at its close, when the walls of the bladder lie in contact with it. Rest in bed lessens the pain in calculus, and urination is less painful in the horizontal position. In cancer, resting in bed has but little influence on it. The hemorrhages are also more violent after active movement, in stone, and they usually only occur after such motion, while they frequently completely disappear during rest; the hæmaturial of cancer are completely independent of bodily movements, and, indeed, they are frequently very violent during complete rest. In cancer of the bladder, especially at the beginning of the complaint, we find only pure blood mixed with the urine, while in calculus we almost always find the blood mixed with pus.

The rectal examination with the finger is usually painful in cancer, and is almost constantly followed by hemorrhage, due to the pressure, even when no pronounced tumor can be demonstrated. Usually the examination with the sound is equally painful, because of the great sensitiveness of the urethra, and it is also always followed by more or less hæmaturia.

But the most important factors for the diagnosis are given by the chemical and microscopic examinations of the urine. The quantity for twenty four hours is not increased, and the sp. gr. is normal. The color, as in parenchymatous hemorrhages, is usually red-brown to black-brown. The cloudiness of the urine originates from the blood, or blood mixed with pus corpuscles.

The reaction is usually weakly acid, and the alkaline reaction only appears when the papillary tissue begins to develop more, and is combined with a more purulent catarrh of the bladder. The sediment is in fine reddish to brown-red colored flakes and contains reddish or flesh-colored fibres, or larger shred-like forms. The consistency of the urine is usually thinly fluid, yet we may temporarily have the gelatinous appearance due to occasional fibrinuria. This is the only disease of the urinary organs, in our latitude, in which tem-

porary fibrinuria can be found. When freshly voided the urine is thin fluid and of a slightly reddish-yellow color. After standing, it coagulates to a jelly-like mass which can hardly be poured from the glass. However, it again becomes fluid after long shaking and can then be used for further examination. It is worthy of remark that such urine does not contain much blood, and therefore does not appear blood-red but reddish-yellow in color, and its coagulation cannot be attributed to the blood present. It coagulates in a few seconds after voiding, and becomes again fluid by shaking, while pure blood which has become coagulated by standing a longer time, does not again become fluid by this means. Fibrinuria is always accompanied by an intense urging to urination. I have seen this condition three times, and only in papillary tumors of the bladder. In each case it was impossible to void the urine.

With anxious sweat on the brow the patient longs for the relieving catheterization. Immediately on voiding, the urine becomes a tremulous jelly, and never amounts to more than 150 c.c., and then each patient finds himself in the beginning of his sickness. We can picture the origin of fibrinuria thus: By the strong, cramp-like contractions of the muscles of the bladder, a compression of the blood vessels of the muscularis takes place. Because of the unequal thickness of the walls of the veins, they are more compressed than those of the arteries, therefore stasis occurs in the loops of the papillary tissue. If the pressure is very strong in these papillary loops there will be a rupture of their walls and hemorrhage into the bladder. If, however, the pressure is not sufficient to cause rupture, the blood plasma escapes, which coagulates after voiding the urine, because of its containing fibrin. The urine contains much albumen and blood-coloring matter. It is worthy of remark that there is much more albumen present in the urine with papillary tumors than would correspond to the amount of blood and pus in the sediment. Therefore it is necessary to presuppose the increased pressure in the capillaries of the papillary tissue. The quantity of albumen is sometimes so strikingly large, even when there is but little blood in the urine, that we are apt to suspect the presence of a parenchymatous disease of the kidney.

Therefore it cannot be too earnestly urged to make careful microscopic examinations of the sediment in doubtful cases. If disease of the kidney is the cause of the albuminuria, it can be only a parenchymatous nephritis and granular cylinders must be found. If they are not to be found we must search for evidences of papillary tumor.

Carbonate of ammonia is not always present. The flocculent sediment is usually brownish colored, in severe catarrh of the bladder, dirty yellow, and in more violent hemorrhage following Rhexis, blood-red. It consists principally of blood or blood mixed with pus. Usually the blood is fluid in the urine, but not unfrequently larger or smaller coagula are found in the sediment. These latter are differentiated from the papillary tissue in that they are dark red, while the papillal are usually flesh-colored. Yet we sometimes find papillal imbedded in the coagula. The blood corpuscles show the same forms as they do in parenchymatous hemorrhage. They are of different sizes, usually small and spherical (microcytes). The more blood and pus are contained in the urine the more difficult it is to find the papillary tissue, which is sometimes very sparingly present. Especially when very much blood is present, we have to thank chance if we find a characteristic shred in the large quantity of bloody sediment. We must also be very careful when the urine contains much pus, although the reddish flakes are more easily distinguishable in the greenish pus than in the dark blood. Therefore, in searching for this tissue we choose, if possible, a comparatively clear and bloodless urine. After allowing the sediment to form for a sufficient time, we collect it in a large watch crystal and fish out the red flakes with a pair of pincettes for microscopic examination.

The papillary tissue may appear under the microscope with the most various forms, according as the urine is alkaline or acid. It is an error to imagine that the papillæ are always as beautiful and perfect, or must be so characteristic as is depicted in the text books.

Perfect, fresh papillæ never appear in urine voided spontaneously, for they are, so to speak, yet living and cling fast to the walls of the bladder. Such can only be obtained where we forcibly enter the bladder with the catheter, and thus tear out the fresh vegetations which may have accidentally lodged in the fenestra of the instrument. In the sediment of the urine there usually only appears detached necrotic papillary tissue, and this may present itself under different forms even when viewed with the microscope. The capillaries given off to the papillæ burst, and from this the latter become necrotic and are cast off. The most beautiful papillæ are found in the beginning of the disease; they are still quite well preserved, and not unfrequently we see, under the microscope, a small, ragged form from which papillæ branch out, not unlike the fringe of a table-cloth. The younger the epithelial layer, just so much the more plainly and beautifully can the papillæ be seen. When they are necrotic and the blood vessels for the greater part dead, we seldom find perfect blood corpuscles in the dilated vessels.

Beautiful and well-preserved papillæ are found especially in hypertrophy of the mucosa of the bladder. However, we are not always satisfied with what we find. Especially in papilloma proper, with massive epithelial layers, it is often very difficult to see the papillæ plainly. The epithelial layer of the necrotic papillæ is often undergoing molecular degeneration in such a manner that we are no longer able to recognize the characteristic outgrowths of the single cells. They are intermingled with blood and pus corpuscles and numerous bacteria, and are stripped from their membrane.

We sometimes see branched forms in this molecular detritus, which represent the connective tissue scaffolding and the blood vessels of the papillæ. Although we have no characteristic holding point for the recognition, histologically, of the papillary tissue itself in such cases, still there is another very weighty microscopic phenomenon which corroborates the diagnosis of this tissue. It is as follows: On examining the suspicious necrotic flakes with a high magnifying power, we not unfrequently find single brownish-colored spots. Viewing these more closely, we will discover beautiful yellow or brown rhomboid tables of hæmatoidin, and also yellow grass-blade-like forms, consisting of the same coloring matter, when the urine is acid. If we allow a drop of diluted fuming nitric acid to flow under the cover-glass, we will see the brownish-yellow spot, together with the whole necrotic papillary tissue, change its color to green, blue and violet. Hæmatoidin is characteristic of old hemorrhagic tissue, and in so far it is of diagnostic importance in cancer of the bladder. We also sometimes find very peculiar crystals in the flakes of this variety of necrotic tissue, such as are otherwise never found in the sediment of the urine. They are small, round, colorless rosettes, which are soluble, without the generation of gas, only in concentrated acids and alkalies. They are unaffected by dilute acetic acid. I have only found them in papillary tissue with an acid urine and therefore consider them as a diagnostic indications of papillary cancer. Apparently they are an unusual (spherical) form of oxalate of lime crystal, because they crepitate after making red-hot on platina foil.

If the urine is strongly alkaline, and catarrh of the bladder is at the same time present, the necrotic papillary tissue will be found completely studded with crystals of earthy phosphates and urate of ammonia. These shreds usually appear in the latter stages of the disease. On voiding the urine, the patient plainly feels that sand-like bodies are passing through the urethra, and they sometimes cause considerable pain. Sometimes they believe that they must be suffering from gravel or calculus and request an explorative examination of the bladder. These sand-like bodies are merely necrotic papillary tissue which are infiltrated and partially incrusted by crystals from the alkaline urine.

If we examine the softer portions of these flakes microscopically we find dense masses which appear homogeneous, except that they are infiltrated with bacteria, studded with needle-shaped and colorless groups of crystals of phosphate of lime, and large, transparent colorless crystals of phosphate of ammonia and magnesia, and small brown sheafs or dumbbells of urate of ammonia.

Sometimes we can find the remains of the papillary framework in these incrusted flakes.

The course of the disease is chronic and the progress nearly always unfavorable. The duration from the time of the first hæmaturia is two or at the most three years. The hemorrhages are most marked in the beginning; later, if the patient has become anæmic and cachectic, they occur less frequently and are replaced by a chronic purulent catarrh of the bladder. Blood corpuscles, however, are always to be found in small numbers in the yellowish purulent sediment. The hemorrhages sometimes continue unabated in violence till the end of the patient's life.

Death usually approaches with the phenomena of uræmia. The patient becomes soporic and vomits brownish-green masses without cessation, and the skin becomes cool. The uræmia originates either through the addition of some kidney complaint to the papillomatous cancer, or through the complete stoppage of the mouths of the ureters by the new growth, thus preventing the escape of the urine. In rare cases the patient bleeds to death, or septicæmia occurs.

ALCOHOL AND CRIME.

THE *Fortnightly Review* contains an able article on this subject, in which it is stated that: "If, however, alcohol is a poison, it is a singular circumstance that the races which indulge in it should have existed for the thousands of years that have elapsed since we hear of its use. It is surely time the deadly effects began to tell; but more strange still does it seem that, whenever a contest arises between the races that take alcohol and those to whom it is forbidden by creed and custom, the victory invariably remains with the descendants of a long line of ancestors who for centuries have been nurtured upon this so-called poison. In the regions of science as well as on the field of battle, in art, in civilization, in health, and in longevity, the descendants of the races that people the northern and western continents are superior to those of the east and south, excepting of course Australia, where, as in the former continents, alcohol is a commodity of common use. And the same superiority is to be found in the moral qualities. For even the most bigoted member of the United Kingdom Alliance will scarcely deny in the standard of morality a higher place to the beer and brandy-drinking Saxon than to the teetotal Turk, or to the degenerate though sober races of the east.

"Nor do the emasculating effects of alcohol become more apparent if we contrast the physical and moral condition of the various nations who use it. The amount that may be consumed by each affords no indication of superior virtues or of criminal excess. The Germans, for instance, among European nations have attained the highest point of military excellence, and the march of their army under the Crown Prince on Sedan was one of the most remarkable feats of physical endurance of the present century. But the Germans are far from being total abstainers. In Berlin, during the year 1882, 410 litres of beer per head was the average of consumption; in Strasburg 420, and in Munich 440; an average in excess of the ordinary consumption.

"So in the case of Great Britain, as compared with the other countries of Europe, we do not find that the £300,000,000, which is said to be the capitalized value of its alcoholic production have produced any degeneracy of a moral or physical or mental character. Prof. Leone Levi has given an effective answer to the statement so often uttered by the orators of the United Kingdom Alliance that the 'record of drink is a record of crime.' Taking the consumption of gallons per head and the conviction for crime per 1,000 of the population of the various countries of Europe, he shows:

Sweden	2.4	881	convictions per 1,000
Spain	7.0	1,012	" "
Bavaria	27.5	654	" "
United Kingdom	31.0	77	" "
France	32.5	413	" "

"From the comparison thus instituted it is apparent that drunkenness has no necessary connection with the increase of crime, or that, if it has any connection, the proportion of the one to the other is of an inverse rather than of a corresponding character. The result of an investigation into the Parliamentary returns of convictions for crime and drunkenness in the English counties, which appeared in the columns of the *Pall Mall Gazette* some months ago, points to the same conclusion. Thus, in Essex, where the charges of drunkenness are exceptionally low, the charges on account of other crimes are exceptionally high, and the same remark applies to Surrey. On the other hand, in Durham, where charges for drunkenness have increased from 7,178 in 1879 to 9,124 in 1881, charges for the other forms of crime have decreased from 549 to 426. Similarly, in Northumberland, where only sixty-seven persons, or three per thousand of the population, were convicted of crime in 1881, upward of two thousand were convicted of drunkenness. Lancashire, Hampshire, Herefordshire, and Hertfordshire supply further instances of this disproportion, as well as the towns of Sunderland, Yarmouth, and Southampton, among many other towns and countries in the United Kingdom. So, by a further examination of these returns, the commonly accepted dogma that intemperance is the principal cause of personal violence receives a like contradiction."

CEREBRAL FATIGUE AS A SIGN OF GENERAL PARALYSIS.—Dr. Sizaret, in the *Revue Médicale de l'Est*, demonstrates the importance of quickly-produced cerebral fatigue as a sign of general paralysis. The symptoms are numerous, easy to establish, and are generally sufficient to prevent any doubt as to the nature of the malady. It frequently happens that, at the commencement of the first period of general paralysis, or during a remission of the disease, the doctor experiences some difficulty in forming a diagnosis of such exceptional gravity. At this time there is neither hesitancy of speech, trembling of the tongue or lips, inequality in the pupils, or delirium, but only a certain degree of maniacal excitation, an exaltation of the sentiment of personality, acts denoting a perversion of the moral sense (*lésion du sens moral*), and a change of manner, but no symptom which might not be met with in some other form of mental disease. The diagnosis is then either suspended or based upon the medical *coup d'œil* acquired by experience. In cases of this kind M. Sizaret considers rapid cerebral fatigue as characteristic of general paralysis. It is, in fact, in consequence of cerebral paresis, which always exists from the commencement of this disease, that all intellectual labor, however simple, becomes impossible in a few moments. In order to assure ourselves of this, it is only necessary to ask the patient to count from one to one hundred or two hundred. If he complies—which paralytics generally do with eagerness—we soon see him making error after error, jumping over tens and hundreds, without perceiving his mistake, and ending in a mass of nonsense. Certain patients may count to three hundred without an error, but generally they cannot get past one hundred or two hundred, and, oftener still, they wind up at a still lower figure. The distance they

can go without a mistake is equivalent, ordinarily, to a kind of dynamometric test as to the amount of cerebral force left to them. At the same time mental fatigue manifests itself in these patients, we observe the embarrassment of speech, and the trembling of the tongue, lips and cheeks, characteristic of their disease. These two signs, errors in counting and embarrassed speech, constitute a precious diagnostic element in the first period of general paralysis.

MURIATE OF LIME.—This drug is highly commended by numerous careful observers, in scrofulous conditions, especially in glandular enlargements and lymphatic troubles, lack of assimilation, with diarrhœa, hectic fever, and night sweats. It has also proved useful in lupus, psoriasis and chronic tonsilitis. It may be given in water—but milk is preferable, as it disguises the disagreeable taste—in from five to ten grain doses three times a day. It is often necessary to keep up its action for weeks, or even months.

LUPUS. — Schwimmer, in a recent German publication, strongly advocates the employment of pyrogallic acid and mercurial plaster in the treatment of lupus. He first removes the crusts with vaseline, and then applies a ten per cent. ointment made with vaseline, changing the dressing two or three times a day, continuing the treatment from four to five days, according to the effect produced. Vaseline is again used for a few days until the irritation is subdued, and then the mercurial plaster applied and worn from ten to fifteen days, changing it two or three times a day if there is much discharge. After two weeks if any nodules are seen in the cicatrix, repeat the same course of treatment.

ECZEMA AND ERYTHEMA.—These oftentimes exceedingly troublesome skin diseases do not generally bear ointments well. In addition to the indicated internal treatment, local applications are generally required. Among the best, Lassar's paste, consisting of starch, zinc and vaseline, is the most widely used; but a pasty application will be found very useful, composed of terra alba, five parts; ol. lini, three parts; lig-plumb-subacotatis, two parts, M.; or terra alba and ol. lini, each thirty parts; ox. zinc and lig. plumb. subacetatis, each twenty parts, M.

BRIGHT'S DISEASE OF MALARIAL ORIGIN.—Dr. Atkinson, in a paper read before the Clinical Society of Maryland, discusses this subject at some length, and comes to the following conclusions:

1. Transitory albuminuria is not uncommon in the course of malarial fevers, and is due to the intense visceral congestions of those affections. It only may endure through the height of the congestion, recurring with each return of this, or it may persist in the intervals, in which event a higher grade of congestion is attained, more nearly approaching a condition of acute inflammation.

2. In a proportion of cases, varying with locality and type of prevailing epidemic, or individual conditions, inflammation of the kidney occurs accompanied by dropsy and the usual symptoms of nephritis.

3. The usual form of malarial nephritis is the tubal and diffuse variety. In this the inflammation seems to be most intense in the vicinity of the glomeruli.

4. Contracted kidney may occur at an advanced stage of malarial nephritis, either from long-continued or frequently-repeated attacks of malarial fever, or from fibriotic changes, such as may ultimately occur in ordinary tubal or diffuse nephritis. It is altogether improbable that this form of renal disease ever occurs primarily as purely interstitial nephritis.

5. These changes may be induced by any form of malarial fever, though they more commonly follow chronic intermittent fever.

6. The tendency of malarial inflammation of the kidney is toward recovery, but structural changes may be produced that are characteristic of chronic Bright's disease, when the gravity of the affection will be as that from chronic Bright's disease, from whatever cause.

7. Treatment should be directed primarily against the malarial intoxication, more especially in recent cases. A correction of this will often be followed by a complete, though often gradual, subsidence of the nephritis. Even in the more chronic cases, the malarial factor in the process should definitely be destroyed if possible, after which the disease should be treated as ordinary Bright's disease.

STIGMATA MAIDIS IN THE TREATMENT OF DISEASES OF THE HEART.—Dr. Henri Dupont has made use of this drug in cardiac affections, and has recorded his impressions of its action as compared with that of digitalis and convallaria (*Union Médicale*, February 21, 1884). In the trials he has made of it, during a period of three years, he has been struck with three facts: diuresis, slowing of the heart's action, with improved rhythm, and the tolerance of the drug shown by the system. The diuretic action is almost always manifested at the very first, and goes on increasing up to the thirteenth or fourteenth day; and it is in cardiac affections, with œdema of the lower limbs or general dropsy, that the beneficial action of the agent is the most prompt and the most evident. While the dropsy diminishes and often disappears, the arterial tension increases and the venous tension is reduced concurrently, the general condition becomes decidedly improved, and in particular, the author mentions a subjective feeling of calmness and *bien-être*, except where there is pronounced dyspnœa. The latter symptom he has never known to be relieved. In hypertrophy, however, and stenosis, the result has almost invariably been excellent. On the whole, the author thinks the stigmata act more powerfully than digitalis, and with about the same energy as convallaria, but that they are to be preferred on account of their not producing the unpleasant effects that sometimes follow the use of either of the latter drugs. The extract is the preparation always employed by Dr. Dupont, never more than three grammes a day being given. The strength of the extract is not stated. He is guided as to the dose by the amount of diuresis—only enough need be given to produce free action of the kidneys.—*New York Medical Journal.*

DEEP BREATHING.—The composition of *nitrous oxide* (laughing gas) is the same as that of common air, except that it has a larger proportion of oxygen; and its anæsthetic effect is thought to be due to its oxygen. Deep and rapid breathing, by supplying an excess of oxygen to the blood, has been found to be an anæsthetic of considerable value. Many operations rendered painless by this measure have been reported. We wish to suggest that this forcible ingestion of oxygen (oxygen is a gaseous food) may be made a valuable therapeutic procedure. Habitual deep breathing will doubtless benefit many cases of anæmia, mal-nutrition, etc., provided that the air be pure. Indeed, we can scarcely imagine any abnormal condition that might not be benefited in this way. Those persons who lie awake at night and toss about restlessly, vainly trying to go to sleep, will find deep and rapid breathing for several minutes to be a sweet and grateful composer.—*Medical World.*

HAY ASTHMA.—Dr. Judkins recommends for this distressing and obstinate trouble, syrup hydriodic acid (Gardner's), a teaspoonful every hour or two until relieved; or from three to five drops of the acid on a lump of sugar at the same intervals. This, in connection with mustard leaves at the wrist joints during the attack, he claims, acts with almost magical effect.

HYDRARG. TANNICUM OX.—A new preparation of mercury, under the above name, is described by Dr. Lustgarter. It is a dark yellowish green, odorless and tasteless powder, easily assimilated when taken by the mouth. It is not liable to cause stomatitis or salivation, or to produce disturbance of the digestive tract.

DIABETES MELLITUS.—Dr. Monkton, of New Zealand, has derived great benefit in even the last stages of this disease, from sulpho-carbolate of soda, in doses of from five to thirty grains. He makes no change in diet, except to forbid the use of oatmeal. Others have used the remedy with but very little benefit.

A POINT IN PROGNOSIS.—In exhausting diseases, such as diarrhœa, typhoid fever, etc., the child, after having for days persistently refused nourishment, suddenly swallows with avidity whatever is offered, food or medicine, indiscriminately. Even *quinine* will be taken as readily as sugar. Such an occurrence is generally hailed with delight by the bystanders, but in reality it is a very untoward symptom. In my opinion it frequently warrants an unfavorable prognosis.

An explanation of this sudden change may, perhaps, be found in the cessation of cerebral function through the want of nutrition or of stimulation.

Combined with this behavior is often found the Cheyne-Stokes breathing, and this coincidence goes far to support the above explanation, as this respiratory disorder has been traced also to the want of stimulation of the respiratory centres.—B. E. Hadra, *American Journal of Obstetrics.*

COMPLETE FRACTURE IN AN INFANT.—Dr. Powell reports a case of complete, not "green-stick," fracture of the humerus of a child who was only four days old. The presumable cause was rough handling by the nurse. Complete fracture is very rare in one so young.—*Medical Bulletin, Jan.*, 1884.

ENLARGED PROSTATE.—Bauch has administered, in this serious trouble, an infusion of the spirea ulmaria (queen of the meadows) to patients in whom urinating or the passing of the catheter was extremely difficult, with the most happy results, free urinating following in half an hour. The fluid extract will probably serve the same purpose.

ARSENIC A PROPHYLACTIC IN CONSUMPTION.—The *Chemist and Druggist*, Nov. 15, 1883 tells us that Professor Buchner states, in the *Aertzliches Intelligenz-Blatt*, that the results obtained by him, by a suitable *arsenic* treatment, in a number of consumptive cases, have led him to conclude that timely and properly regulated doses of *arsenic* are of intrinsic value in contending with the disease.

It appears that *arsenic* acts as a prophylactic, and hence it should be employed as soon as symptoms of the disease begin to show themselves. The author says that, although in the very early stages the beneficial effects of *arsenic* are not directly noticeable, from the peculiar latent state of the malady, they are very evident in the case of a person who has reached the middle stage, the fever and nocturnal perspiration generally completely disappearing with a twelve days treatment; and further, that when an *arsenic* treatment is begun when the disease may be said to be ripe, although it is probable that it is too late for a complete cure, great relief is afforded.

The *arsenic* is taken in the form of an aqueous solution of a strength of one in 2,000, of which from 5 to 10 c. c. are given thrice daily with the meals.

MISCELLANY.

—Chloroform, topically applied, is the latest remedy in Rhus poisoning.

—The New York Ophthalmic Hospital reports 4,240 prescriptions dispensed during August.

—The Ward's Island Hospital treated 817 patients during August, with a mortality of 3.06 per cent.

—In Calcutta during the month of April there were four hundred and eighty-six deaths from cholera.

—A child recently born, in West Troy has three perfectly formed legs, the third protruding above the right hip.

—Russia has the highest death rate of any country in Europe. The average duration of life is only twenty-six years.

—A man recently died in the New York Hospital with yellow fever. Post-mortem examination confirmed the diagnosis.

—Dr. C. B. Currier, San Francisco, has removed his office to 921½ Geary St. Dr. F. F. Moore has removed to Salem, Mass.

—Dr. Chas. Deady, late resident officer of the New York Ophthalmic Hospital, has located at San Antonio, Texas, on account of his health.

—*Polytrictium Juniperum* (tincture, in watery solution) is highly recommended by Dr. A. M. Cushing as a remedy for retained or painful urination in old people.

—The fine toothed comb should be banished from the toilet-table, as it is an active agent in producing inflammatory conditions of the scalp, as many a case of eczema capitis in children will testify.

—A room has been endowed with $5,000 in the Hahnemann Hospital, by Mr. Gordon Burnham, as a memorial to Mrs. Burnham, one of the founders of the hospital, and for many years President of the Lady Board of managers. Mr. Burnham has also donated to the hospital an elegant portrait of Mrs. Burnham.

—The mould-like fungus which sometimes attacks fish in an aquarium can be removed by putting the fish for a minute or so in a bath of common salt and water. But no organic material must be afterwards put into the aquarium, which, by decomposing, would nourish a new crop of fungi sown by flying spores.

—It has been settled that the next meeting of the International Medical Congress shall be held in Washington, in accordance with the formal invitation extended by Dr. Billings of the United State Army, in behalf of the American Medical Association. Berlin, St. Petersburg, and other cities, were competitors for the honor.

—Of the 600,000 patients who come every year to thirteen of the best hospitals in London for advice and medicine—which latter alone costs £15,000—it is notorious that a large proportion can perfectly well afford to pay for what they receive as a free gift. The wards are also crowded with patients many of whom are scarcely fitting objects for charity.

—Prof. Gross never operated on menstruating women, if it was possible to avoid it. Oozing is apt to occur from the wound.

—Dr. Schwenniger, a homœopathic physician employed by Prince Bismarck, has been appointed to a professorship at Berlin University.

—The *British Journal of Homœopathy*, one of the oldest and best publications of its class, will cease to be published after the present year.

—Our thanks are due to Dr. John Younglove, of Elizabeth, N. J., for a copy of the Seventh Annual Report of the N. J. Home for Disabled Soldiers, G. A. R.

—Profs. W. A. Edmonds and S. B. Parsons have become the Editors of that excellent journal in St. Louis, the *Periscope*. Please accept our cordial best wishes for success.

—A room for sick artists has been endowed with $5,000 in the Homœopathic Hospital in Brooklyn. The officers of the Brooklyn Art Association nominate the beneficiaries.

—Dr. I. Collis Brown, who devised the well-known and popular remedy called "Chlorodyne," died recently in London, leaving a large fortune, obtained from the sale of his remedy.

—The twenty-fifth annual announcement of Hahnemann Medical College and Hospital of Chicago, with a picture of its new clinical amphitheatre, shows the institution to be in most flourishing condition.

—Dr. C. B. Currier writes that the Hahnemann Medical College of San Francisco is an assured success. The College has a graded course of three years, a class of marked intelligence, and ample clinical facilities.

—Glenwood Springs, Colorado, bid fair to rival the hot Springs of Arkansas in their healing qualities and popularity with the health-seeking public. The general advantages of the Colorado climate are already well known.

—Those of our readers who are interested in the proving of drugs can learn full particulars of the work proposed and of the prizes offered by writing Dr. A. W. Woodward, Sec'y of the Committee, 130 So. Ashland Ave., Chicago.

—Cleveland is the first city to secure a regular Board of examiners for plumbers. Its *personnel* consists of the city civil engineer, the engineer of the water-works, the health officer of the city, and one master plumber.

—The New York State Board of Health is about to undertake a "collective investigation" upon a very important subject. It is intended to collect facts bearing upon the question, when a patient convalescent from an infectious disease ceases to be capable of conveying the infection.

—A pavilion for sick children is to be erected, at once, in connection with Ward's Island Hospital. This will add greatly to the clinical facilities of this most useful institution, and will afford the members of the house staff an excellent opportunity to study the affections incident to childhood.

—The London *Lancet* hopes, in the interest of Leicester and of the whole country, that the waywardness of that town in regard to vaccination has reached its height. Twelve hundred persons are awaiting trial, and others are now undergoing terms of imprisonment, for having evaded the act.

—It is stated that the London hospitals alone contain upward of 5,000 beds, many of which are unoccupied, not from want of patients, but from want of funds; and it is estimated that more than a million of the laboring class annually receive gratuitous aid from these institutions.

—The *Century Magazine* for July has a very amusing article showing how an honest surgeon prevented a discharged captain of volunteers from procuring a pension. The investigation showed that the discharge was based on the ground of "constitutional cowardice," an affection which no doubt many pensioners are still suffering with!

—A new liquid hydro-carbon introduced by Mr. Friedel boils at 100° Fahrenheit, and gives a brilliant light, white and without heat. The corner of a handkerchief, or even the finger, dipped into it serves as a temporary light without injury. In case of accidental ignition, the slightest puff of wind is sufficient to extinguish it.

—The late Professor Filippo Pacini has left records of a series of original microscopic observations on cholera, which are in course of publication by Vallardi, of Milan, under the editorship of Dr. Aurelio Bianchi. The *Lancet* thinks it will be very interesting to compare with Professor Koch's the observations of one so eminent in histology as the discoverer of the Pacinian bodies.

—An attempt to isolate the bacillus of enteric fever will probably be made under the stimulus given by the munificent offer of a fellow of the Linnæan Society of New South Wales, to give a prize of $500 for the best essay on the life history of the bacillus of typhoid fever. Compositions must be written in English, and delivered at the society's house by December 31st next.

—The preparation of photographic plates is charged with causing amblyopia, and a spasmodic action similar to "writer's cramp," due, it is claimed, to "the vapor of hydrocyanic acid formed by the decomposition of cyanide of potassium by bichromate of potassium." The matter of ventilation of the dark room where these plates are developed becomes an important factor to the workers in this art.

—After sixteen years' study, Prof. Cohn, of Breslau, concludes that myopia or short-sightedness, now so common, is never connate, but is due to strains upon the eye by study in early youth. It is not often found in pupils of village schools, but increases in proportion to the demand upon the eye in high-schools and colleges. The evil, he thinks, may be obviated by improved desks, typography of text books, and the better lighting of rooms.

—In the Indiana *Medical Journal* of July, Dr. P. Cullen gives a table of thirty-eight cases of leprosy, setting forth age, sex, occupation, family history, etc., of the sufferers. Asiatics, as a rule, do not believe in communication of the disease by personal contact, but are highly suspicious of food which has been handled by a leper. In no case out of the thirty-eight were the living children of the lepers affected with leprosy, and in only four cases was admission made of the disease being present in the parents or grand-parents, thus far indicating the absence of heredity in the causation of the malady.

—By vote of the Inter-Collegiate Committee of the American Institute, it has been decided that after the session of 1884-85, all colleges represented on that committee and therefore in the Institute shall require an entrance examination previous to matriculation. This examination shall include:

1. Creditable certificates of good moral character.

2. A diploma, certificate or other proof of graduation from a college, academy or high school, or a State or county teacher's certificate, or lacking this:

3. A thorough examination in the branches of a good English education, including elementary mathematics English composition and elementary physics or natural philosophy.